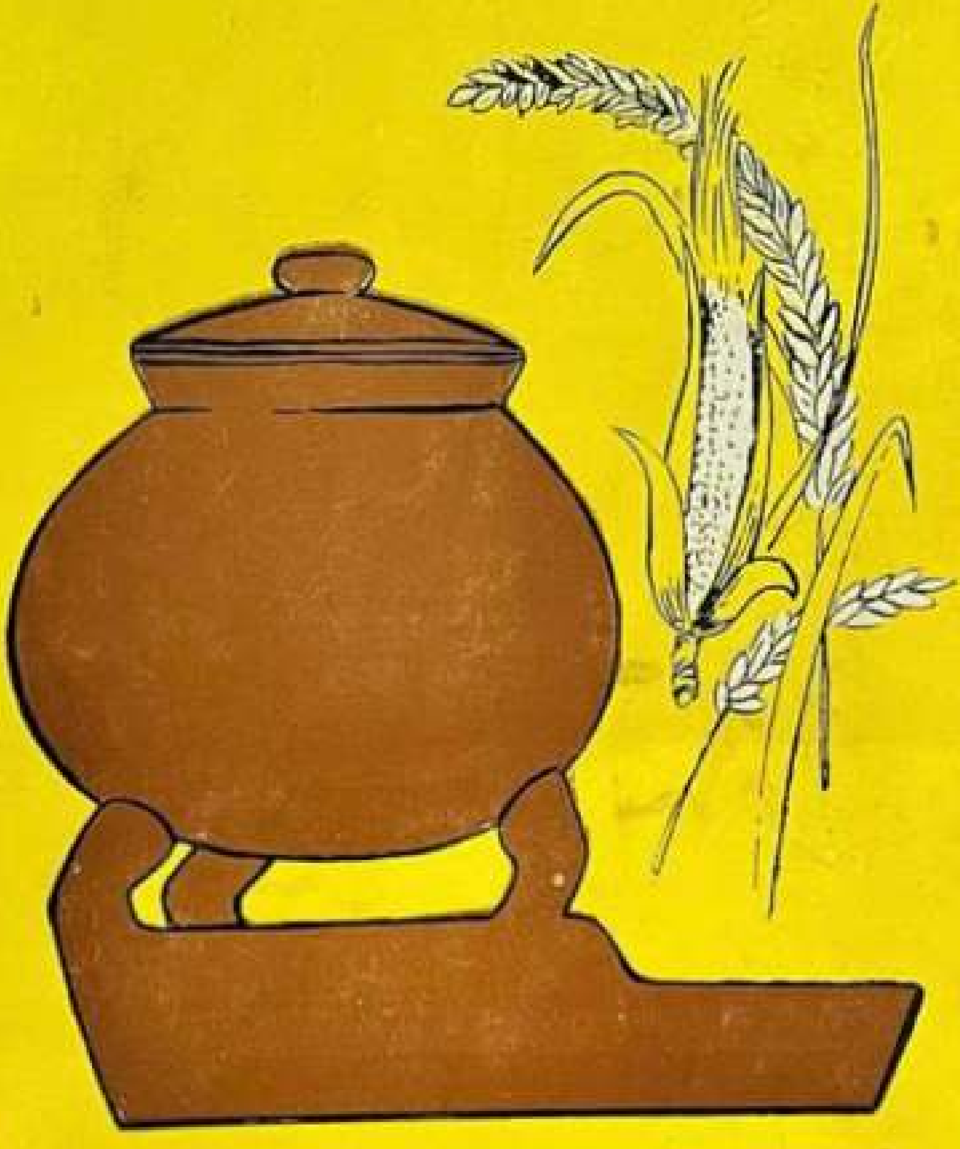
Maria Y. Orosa

Her Life and Work

700 RECIPES:

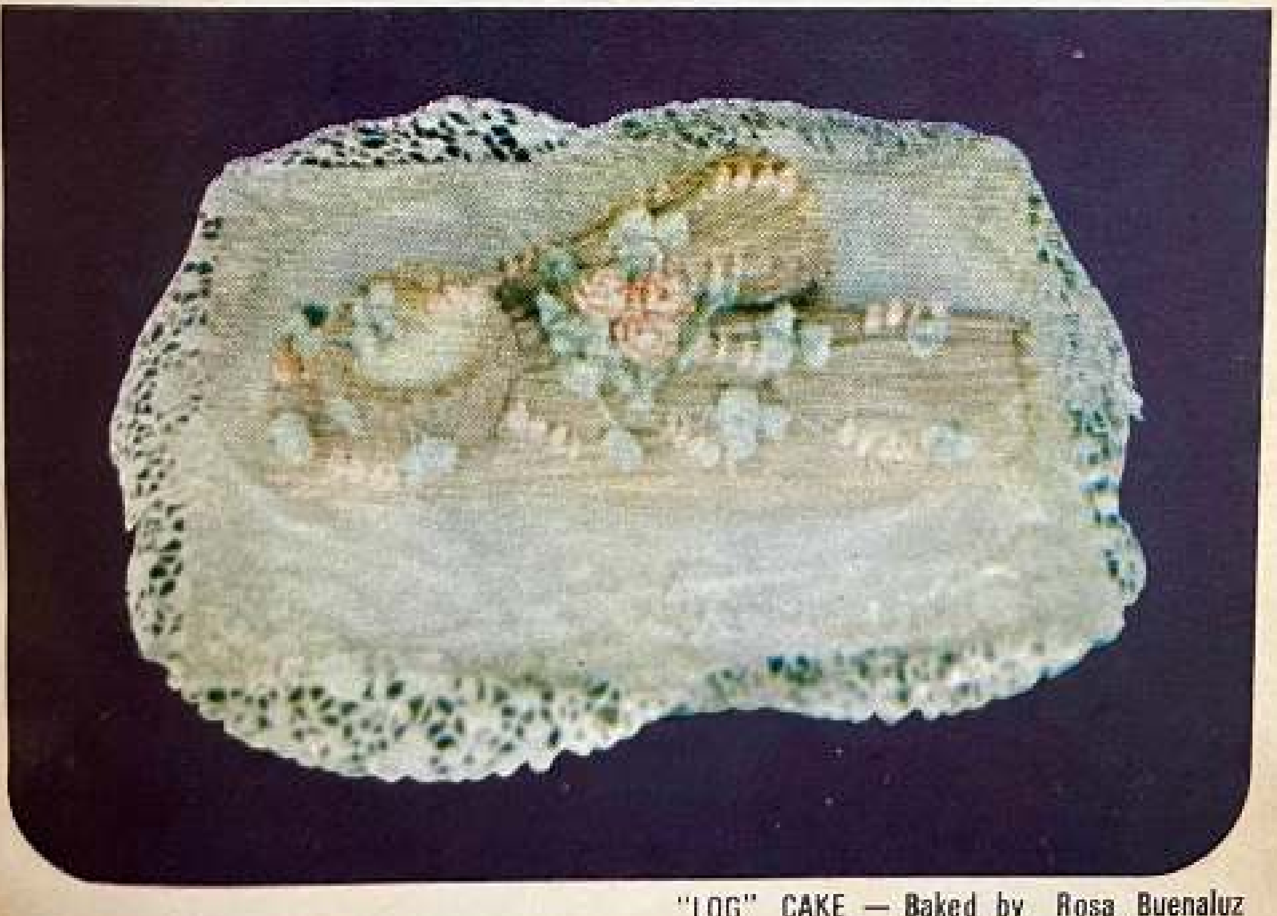
CANNING
PRESERVES
JUICES
WINES
CANDIES
JELLIES
JAMS
MARMALADES
CAKES
PICKLES
SOY SAUCE
CATSUP
VINEGAR
SOAP
and
SCIENTIFIC STUDIES



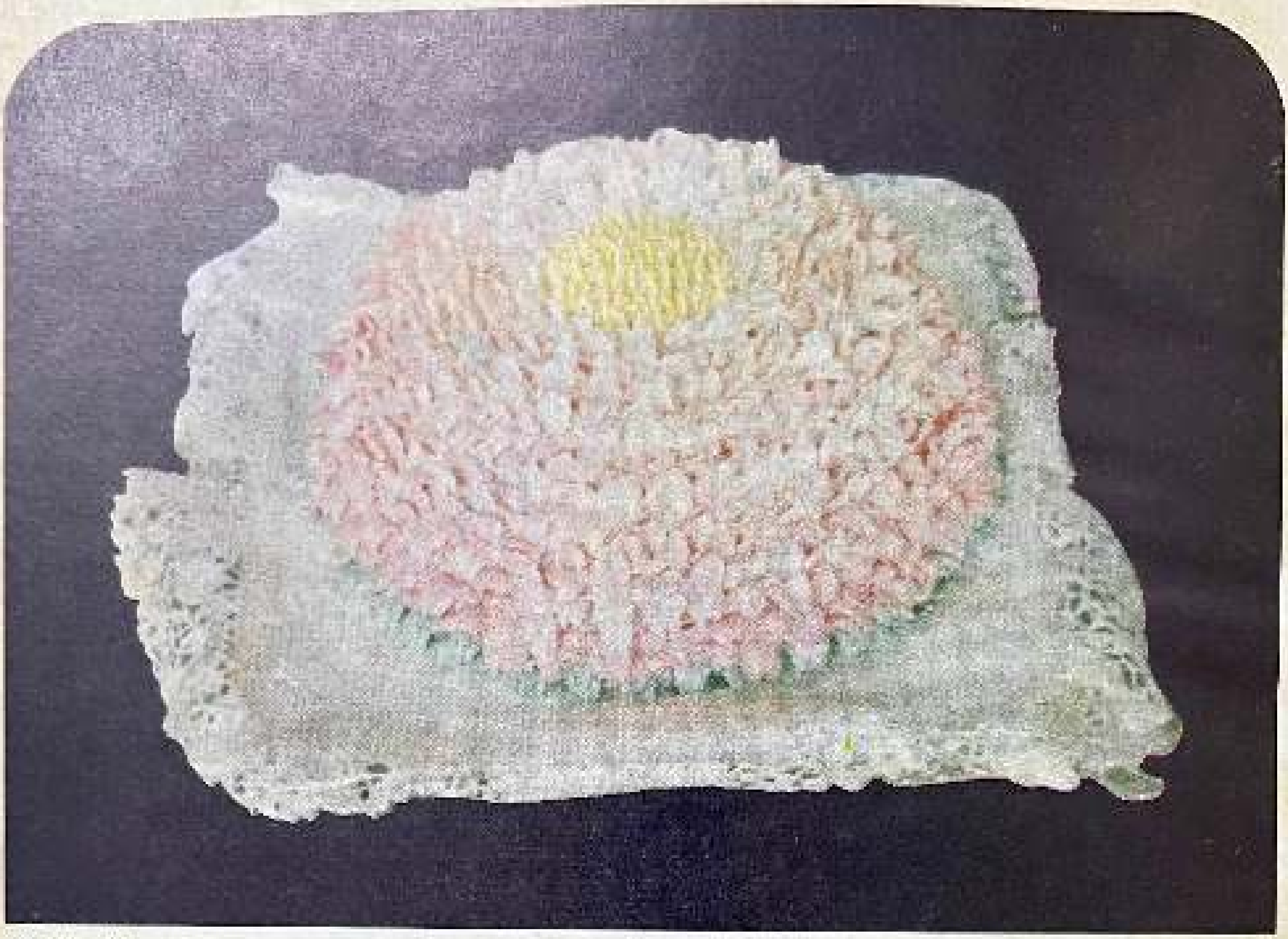
Compiled and edited by
HELEN OROSA DEL ROSARIO

REPLICAS OF CAKES BAKED DURING MARIA Y. OROSA'S TIME

"BOOK" CAKE — Baked by Estrella Ylagan



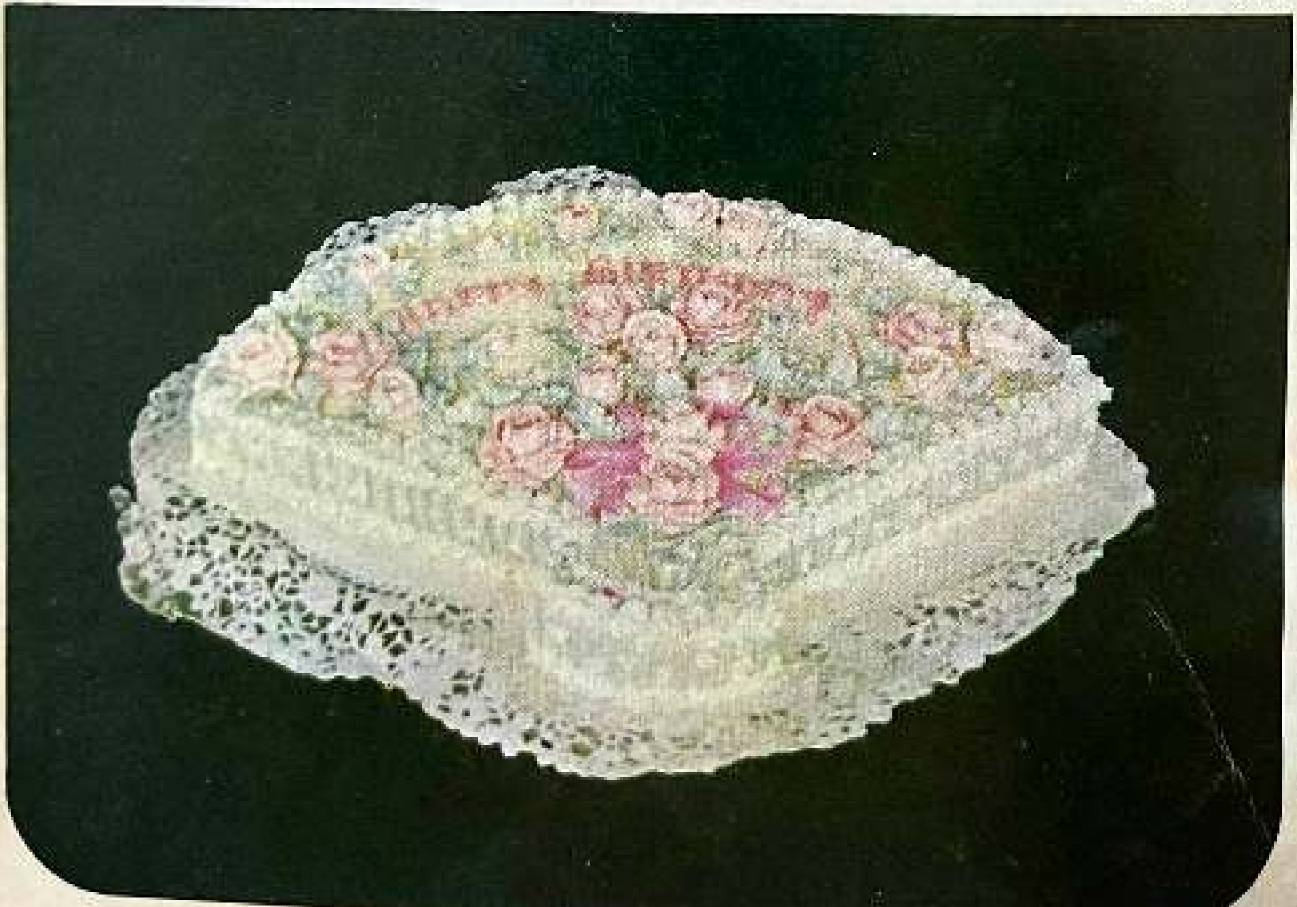
"LOG" CAKE — Baked by Rosa Buenaluz



"DAHLIA" CAKE

Baked by Rosa Buenaluz

"FAN" CAKE



Photos, courtesy of Pacencia E. Lopez

Maria Y. Orosa

Her Life and Work

[redacted]

Compiled and Edited by

HELEN OROSA DEL ROSARIO

[redacted]

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by Helen Orosa del Rosario
57 Panay Avenue, Quezon City

[redacted]

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To Vice President and Concurrently
Secretary of Agriculture and Natural Resources
Fernando Lopez
&
Mrs. Mariquit J. Lopez

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To the Bureau of Plant Industry for the photos of the preserves, canned goods and wines, taken by Juanito Villamor of the APC.

HOR

TABLE OF CONTENTS

Part I

Pages

Foreword .... *Pilar Hidalgo Lim* viii

Introduction .... *Helen O. del Rosario* ix

Maria Y. Orosa .... *Yay Panlilio* x

My Tia Mary .... *Rosalinda L. Orosa* xii

Reminiscences .... *Amadea Medina* xxiii

Memorials to Maria Y. Orosa .... *Aida F. Abaya* xxiv

Palomaria — Maria Y. Orosa Memorial Tree *Benedicto Leaño* xxvi

Re-naming 'Maria Y. Orosa Street' *Commissioner Francisco Saguiguit* xxvii

Resolution .... *Councilor Mariano Magsalin* xxix

For the Record .... *Lyd Arguilla* xxxi

Part II

Chapter I — Some Outstanding Research Studies of the Late Maria Y. Orosa .... *Jose I. Sulit* 1

Chapter II — Preservation of Philippine Foods *Maria Y. Orosa* 5

Wine Making and Canning .... *Jose I. Sulit* 49

Chapter III — Coconut in Our Daily Diet *Maria Y. Orosa* 57

Something Out of Nothing .... *Maria Y. Orosa* 79

Chapter IV — Soy Beans as a Component of a Balanced Diet and How to Prepare Them .... *Maria Y. Orosa* 82

Chapter V — Roselle Recipes .... *Maria Y. Orosa* 128

Chapter VI — Introduction — Fish As Food .. *W. Adams* 148

Fish — We Like It Fresh .... *Maria Y. Orosa* 152

Fifty Recipes for Fish and other Sea Foods 153

Chapter VII — Rice Bran: A Health Food and How To Cook It. .... *Maria Y. Orosa* 175

Chapter VIII — Food and National Defense *Maria Y. Orosa* 194

The Orosa Palayok Oven 195
Simplicity Itself 198
Speaking of Food Substitutes 200
A Well Balanced Diet 202

Chapter IX — Papaya Recipes 205

Chapter XI — Vegetable Recipes:

Talinum Recipes 211
Alugbati Recipes 213
Chaya Recipes 214

Chapter XII — Peanut Recipes 219
Cassava Recipes 223

Chapter XIII — Rice and Corn Recipes 227
Rice and Corn Contest 231

Chapter XIV — Main Dishes 244

Chapter XV — Delicacies 250

Chapter XVI — Miscellaneous (Recipes and other Preparations) 256
Kitchen Hints 259
Abbreviations 260
Equivalents 260
Definition of Cooking Terms 261
Oven Guide 264
Tagalog-English Translation 265
Sea Foods Found in the Philippines 269

FOREWORD

I am deeply gratified that a book has finally put on permanent record the life and work of Maria Y. Orosa. I had the rare privilege of knowing Miss Orosa when she was alive, and it was in fact my close association with her that led me to a full cognizance of her tremendous upliftment of the Filipino way of life. Indeed, there is no phase of homemaking in our country that has not been influenced for the better by the enterprise, resourcefulness and industry of Miss Orosa.

For this reason, I earnestly hope that future home-makers, particularly those majoring in home economics, nutrition and chemistry, will take time to read this valuable book not only to enrich their knowledge as they gather data from Miss Orosa's illuminating scientific researches on nutrition and diet, but also to derive inspiration from her most edifying character.

In closing these brief observations, I would like to commend Mrs. Helen Orosa del Rosario, compiler and editor of this book, for her labors in gathering and in putting together the diverse, widely-ranging materials that herein convey a trangibly composite view of Miss Orosa's significant achievements. I have not the least doubt that Miss Orosa is totally deserving of the diligence, the patience and the many hours of devoted work that must surely have been entailed by the publication of this book. Precisely because of the importance of Miss Orosa's contribution to the Filipino hearth and home, and the consequently enviable place she occupies among our women of distinction, this book is in itself a genuine achievement. I dare say our country will not produce another Maria Y. Orosa in a long, long time.

February 13, 1970.

PILAR HIDALGO LIM
President
Centro Escolar University

INTRODUCTION

By Helen Orosa Del Rosario

I was the closest relative to have stayed with Miss Maria Y. Orosa during the Japanese occupation, and the last to have seen her alive.

Let me just briefly recall an incident. I saw her quite often in her office on San Andres or at our house on Taft Avenue where she was then staying, and once, upon greeting her, I cried and clung to her for no apparent reason. She then gave me a pack of cigarettes which bore the picture of General Douglas MacArthur and the inscription "I shall return." Forthwith, she told me that the Americans had already landed in Luzon and that I must be hopeful. This made me certain of her underground activities. When I said goodbye, I embraced her tightly and she remarked, *"Mahina pala ang loob mo."* ("You seem faint-hearted.") Now I know why I cried: instinctively I had felt it was the last time I would see her, and subsequent events proved I was right.

Looking back, I naturally cherish all the hours I had spent in her company during the war, and I feel privileged to have shared with her in her secrets, sorrows, friends, and whatever happiness — it must have been precious little! — she might have had during those harrowing days of bitter separation from loved ones, days of privation, fear, real risk and danger. She was a genuinely warm friend and aunt, and she also shared in my joys and sorrows.

Miss Orosa told me she had a manuscript of her works (this included her famous recipes). It has been my long-time dream to revive and publish her writings and, in so doing, help her further realize her life-long ambition to improve the lot of the Filipino family, both the rural and the urban. I have therefore deemed it my mission to try to publish whatever is left or salvaged of that manuscript.

Through the proddings of the women who worked with her* and who, twenty-five years after her death, remain steadfastly loyal to her memory, my dream has come to fruition with this book, on her twenty-fifth death anniversary.

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* They are now fondly referred to as the "Orosa girls".

MARIA Y. OROSA

By Yay Panlilio

Talking about heroism, Mary Orosa was one of those who was always a heroine, but nowhere along the line of her life can the precise point be distinguished where her heroism began. It simply functioned through all her activities to her last breath, wounded, helpless, alone, somewhere in Malate during the Liberation.

If you called her a heroine to her face, if she were alive today and you did that, she'd laugh at you. There were no "heroics" in her nature. She was too busy for anything but the most mundane matters—!

One of them was the first successful baking of sugar cookies in an ordinary clay pot. They were fine cookies, crisp, fragrant. She'd started with macaroons, the myriad use of coconut being part of her goal, and gone on to everything edible that would respond to intense dry heat.

I don't know just what Mary's job was then, I mean by its title. I'm not even sure I bothered to find out. It was enough that she was there at the old Bureau of Plant Industry at San Andres off Taft. Drifting by, a reporter idly on the prowl, I'd nose around the premises for her, or she'd see me and hail me, and sure enough, there'd be something else on test that I could guinea-pig taste for her.

She had already, then before the war, perfected her cashew (kasuy) wine and, yes, her plum (duhat) wine. The cashew wine was a delicately flavored golden syrup, the duhat, sharp, thin, dark. Cookies and wine, when I hove into sight, went the way of all good things as she anxiously watched. I would say, "In case you don't know, I have the stomach of a goat," or, "If you expect me to drop dead, what *did* you put in it?", and she would chide, "But *seriously,* is it good, is it *all right?*" I would nibble and sip and tease. Perhaps Mary was a nutritionist. Certainly she was a scientist.

As a scientist, she could "hold office" anywhere — on a counter, on a shelf, over a stove, in a notepad fished up from a capacious pocket as she recorded a finding in degrees of heat, density, clarity, precipitation, things like that. She was "finding a way" for anybody to do what she did, and it always had to do with better food for all, and, I told her, especially for me, and she would laugh. Our friendship was one long joke.

Just before the war, Mary was working on concentrated food long before the millions had heard of such a thing. God knows what she put into her concentrated food — tons of kangkong, kaings of bran, drums of molasses — but it was to save many, many lives, including those of men and women under battlefire unable to find food, let alone, encircled by the enemy, to cook it.

It was a little heavier than flour, but fine and porous. The color was an appetizing golden tan. It smelled a little like cookies. Maybe she threw in leftover cookies. *One tablespoon a day* could keep a starving man's digestive system open, his bowels functioning normally, no cramps. A palmful could keep him on his feet. Two palmsful, he could fight. Many didn't know this then. I was to send her a note after April, 1943, to tell her how her concentrated food had saved my life among others. I knew her so well that I knew being informed would result for her in two things: (1) another note into the notebook, and (2) all the reward she would ever have wanted.

The terrible, horrible, heartbreaking irony of it was that Mary, engrossed in her life's-work, could never tear her attention from it, even for a while. She was warned to alert all her unit, to get her and her guerrillas out of the city. She received this communication not later than October, 1944. In late November, she herself was *ordered* to evacuate. And surely she had signs all around her that it was time to go, at least for a while. But she wouldn't. She was her own commander, first, last and always.

Today, a book about her by her neice Helen is being launched. I wonder, will Mary laugh in it? Work, flushed, over that palayok? Hang anxiously over her guinea-pig friends? Equate the formulas into recipes for life-sustaining powders that won't need even water let alone fire to make them palatable as well as digestible? Be teased and protest?

Looking back, there were many heroines, but Mary was the only one of her very special kind.

MY TIA MARY*

By Rosalinda L. Orosa

Line etching by Rod Dayao

Every time an article on my late Tia Mary appears on or shortly before her birthday anniversary (Nov. 29), my friends always ask me, "Why don't you write something about her?" Obviously, the query is based on the assumption that being a close relative, I should know much of her life and work. There is of course logic in the assumption, for which reason, I am writing this little piece fifteen years after her death.

As a child, I always regarded my Tia Mary as something of a fairy godmother — a real, flesh-and-blood fairy godmother who invariably brought, on her visits to the house, dresses, dress materials, cookies, candies and those inimitably delicious cakes she baked which simply melted in the mouth.

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* Reprinted with permission from the *Manila Chronicle*, Nov. 24, 1960.

All other relatives, friends and employees, for their part, must have considered her something of a female Santa Claus, for she kept giving them gifts, lending them money, or extending them favors in and out of season.

Being generous to excess, she naturally found it impossible to save money. Her mother, brothers and sisters despaired of this fact, and indeed on various occasions when they gathered for some family celebration, I would hear them commenting that Mary was "broke" again. It would have been difficult for any outsider to understand how a woman, unmarried and with a good salary, could spend money faster than a married man with many children to support . But her family knew the reason, a reason which was so typical of my Tia Mary's character.

A contemporary of my aunt, Maria Alvarez (now Mrs. Manuel Villareal), remembers her humility and modesty. Years before the war, the then Miss Alvarez was with an American firm which dealt with electrical kitchen appliances. Her particular job was to demonstrate the use of electric refrigerators and ovens. "At that time," Mrs. Villareal recounted to me, "your aunt was already considered an authority on cooking. She had gone twice to the States to study and had authored a book on the culinary arts.

"One day, she asked me how I baked pie crusts. At first I thought she was mocking me and I felt rather offended. But your aunt assured me she was serious, saying that it was quite possible for me to know a better way of making pie crusts. She wanted to keep improving and was humble enough to ask others to teach her if she sincerely believed they could."

Let a former demonstrator of my aunt, Rosa Gutierrez Buenaluz, speak of her other character traits. Not too long ago, Mrs. Buenaluz told me, "Your Tia Mary was a very demanding boss, but because she never spared herself, we felt we had to give her our best. I especially recall the many Christmas seasons during which we would be baking hundreds of cakes. During the rush, we would be on all-night shifts, catching a few winks every so often. But we somehow did not mind it. Your Tia Mary was so kind and generous to us, it was only natural that we should be fiercely loyal to her.

"Because she was very frank, open and straightforward in her dealings with us, we always knew whether or not she was pleased with our work. Of course, anyone who committed a mistake was sure to get a thorough scolding, but this was always done behind closed doors. She never reprimanded anyone in public, and after the scolding, everything would be forgotten. She was incapable of holding a grudge.

"In those days, we often prepared the menu for big government functions in Malacañang under your aunt's supervision, and when the party ended, she would ask us to gather all the food left over and divide this equally among us. No one ever went home empty-handed. Whenever we worked overtime, she would have each one of us conducted home by office car.

"Your Tia Mary had a complete list of her girls' birthdays. She spent most of her salary on birthday and Christmas gifts which she gave to each and every member of the Plant Utilization Division she headed. Her list of recipients included the most insignificant clerk and janitor, and any employee who got sick would be sure of gifts of food and money which she herself would bring."

It seems to me my aunt's generosity was both a good and a bad trait. For she was fair game for every moocher and opportunist who crossed her path. She was always ready to lend an ear to any sob story, and before she knew it, she had forked out a few pesos to a friend in distress.

Most of those who abused her generosity were, ironically enough, the well-heeled, many of them being the wives of ranking government officials. Perhaps they did so unwittingly. They would often ask her to prepare the food, or at least a special dish or cake, for a party they were giving — thinking perhaps that the expense this would entail would come from office funds. Characteristically, my aunt would spend her own money for these gifts, without her friends being the wiser.

If people abused my Tia Mary during her lifetime, people are still abusing her years after her death. A number of my aunt's former home economics demonstrators have told me that a former employee of the Plant Utilization Division had asked them for the native food recipes of my Tia Mary, then had these recipes published in book form as her own, without due acknowledgement to my aunt or to her girls who had tested these recipes under her guidance.

But other former employees of my aunt have given her due credit for her pioneering work in plant utilization and research, the significance of which work I was to realize only years after her death. One such employe is Jose I. Sulit, my aunt's immediate assistant, then retired chief chemist of the Bureau of Fisheries, and now vice-president of the General Fertilizer Corporation. In his scientific report entitled "Some Outstanding Research Studies Conducted by the late Maria Y. Orosa", he observes in closing, "It is quite clear and apparent that many food laboratories, both government and private, are now using the results of the aforementioned studies that purely emanated from the resourcefulness of the late Maria Y. Orosa. In fact, some government food laboratories are still doing the very same experiments if not continuing from where Miss Orosa stopped.

"In the war years the results of those experiments were fully implemented through the various units of the Philippine Home Workers' Association initiated and founded by Miss Orosa." Referring to his enumeration of her research studies and experiments, Mr. Sulit continues, "These are but a few of the many outstanding unselfish services and sacrifices that Miss Orosa has contributed to country and people and the whole world."

What was Miss Orosa's endeavor which Mr. Sulit called 'outstanding unselfish services and sacrifices'? An examination of his report points to an inevitable conclusion, namely, that my Tia Mary was a passionate nationalist. For underlying all the studies and researches she conducted in plant utilization and food preservation was her determination to use native materials, whenever possible, in the preparation of foods; to discover and subsequently to exploit the potentialities of our own plants, vegetables and fruits, thereby minimizing, if not altogether eliminating, the need to import foreign ingredients, foods and canned stuff.

For instance, she utilized native fruits in the manufacture of wines. Using tamarind, santol, calamansi and other fruits as the source of acids, she manufactured fruit jellies from guava. Soybeans and other beans, and even copra, went into the manufacture of toyo.

Her sweet-mixed pickles were made of native vegetables; she turned powdered soybean into "magic food." When she baked bread cookies or cakes during the war, she substituted native cassava flour for wheat flour; she likewise turned powdered green *saba* banana into flour for baking; she dried native candied fruits for use in the preparation of fruit cakes; her calamansi concentrates replaced foreign bottled drinks.

Clearly, my Tia Mary's obsession was to make the Filipino household self-sufficient. She studied the preparation of soybean milk, jams, jellies and marmalades, of agar from seaweeds (gulaman-dagat) — with the purpose of equalling or excelling their foreign counterparts. She used coconut in the preparation of flour, cassava for breakfast, coco-honey, milk, nata de coco, vinegar, soup, cheese and butter, cooking and salad oil, candies. She also converted the coconut into a pharmaceutical vehicle.

With peanuts here growing in abundance, she experimented with their use in the preparation of candies, salad and culinary oil, butter, flour. She also experimented in the pickling of cucumber and green tomatoes, in the making of catsup from banana, mango, ripe tomatoes, etc. She made nata de piña and utilized its by-products in the manufacture of vinegar. For this particular work, Mr. Sulit carefully points out that "Before Del Monte ever thought of making vinegar from pineapple, Miss Orosa had been making it even before World War II."

In her innumerable and exhaustive researches, nothing seemed to escape her avid curiosity and insatiable thirst for knowledge. She extracted nicotine insecticide from tobacco dust and tobacco waste material; devised a practical method of determining retenone from derris roots; converted rice bran into food rich in Vitamin B1 or thiamine — that which combats beri-beri in nursing mothers.

As frugal as she was ingenious and resourceful in her methods, she made use of by-products, thereby wasting nothing. As already stated, the by-products of her nata de piña went into the manufacture of vinegar. In her studies on the preparation of soybean curd, she turned the resulting by-product into flour for bread and cookie-baking. She even determined the food values of these by-products and, whenever possible, tried to find additional uses for them.

As conspicuous in Mr. Sulit's report are my aunt's research studies and experiments in food canning and preservation, doubtless aimed at eventually making the country less dependent on its considerable importation of canned goods. My aunt made studies on the preservation of various fruit juices and the preparation of dehydrated or frozen fruits such as mango, santol, papaya and of dehydrated vegetables and shredded beef. She exported some of these frozen foods. She also devised a process of canning concentrated food for the army. She succeeded in preserving macapuno, and canned various nuts with the aid of a vacuum. She preserved toasted kasoy nuts, *saba* banana, camote and potato chips. Under her, "the girls" learned the natural preservation of fruits and vegetables in solution for display purposes.

My Tia Mary's comprehensive research studies, began in 1935, reached their peak of productivity during the war years, ending abruptly in her death in February, 1945. Typical of her unselfishness, she had readied for publication a complete manuscript of her findings for others to use.

According to her assistants, she told them constantly, "When you start an experiment, try to finish it and don't forget to write the results for other people to read." With deep regret, Mr. Sulit writes, "Unfortunately, because of the war, the results of her important studies were not published and the records perished when the Bureau of Plant Industry building was destroyed during the liberation of Manila.

"Being the immediate assistant of Miss Orosa in all these research studies, I was, however, consoled by the fact that the results of her studies, as implemented, found their uses in the manufacture of various food products during the Japanese occupation, to the extent that so many tons of food products were sold to hungry people to partly substitute for the imported items. In view of the emergency, the capacity of Miss Orosa to do research was very fruitful and served as the fountainhead of new ideas to partly meet the needs of our country and people."

It was during this period of emergency that my aunt came to live with us in our house on Taft Avenue—since then burned by the Japanese—which was quite close to her place of work at the Bureau of Plant Industry on San Andres St. Every now and then, my mother would take me along to the Plant Utilization Division which my Tia Mary headed. What a beehive of activity she had converted it into! Hundreds of women were busily working or attending demonstrations which were going on simultaneously. In the midst of all these varied occupations I would see my aunt walking, or more often, running hither and thither. She was the only chubby person I knew who moved about with agility, with marvelous, untiring energy.

Much later, "the girls" told me that during the Japanese occupation, my Tia Mary had provided work for the four hundred students who had been stranded by the war in Manila. So that was why there were so many women in her office! My aunt had created various units (e.g. candy, cake, cookie, canning and other units) which kept the students gainfully employed — and sufficiently fed. Each unit was supervised by one of my aunt's key workers.

Through her stay with us, my Tia Mary never talked about herself or her activities, save on one occasion during which I had asked for stories about her childhood. For instance, while she lived with us, I never found out that she was with Marking's guerrillas (she held the rank of captain), and that she was then supplying our soldiers in the front with various food items, among them the protein-laden 'magic food" — that wonderfully strengthening powdered soybean which sustained through the war many a guerrillero, many a prisoner of war or American internee in the concentration camps of Capas, Los Baños, Camp Dao and Sto. Tomas. Indeed, to this day, people — sometimes complete strangers — tell me that my Tia Mary had supplied them with food during the war.

Years after the liberation, stories reached me of how my aunt would insert packages of food inside bamboo tubes which she would send to the UST internee camp through her men employes disguised as carpenters. Bearing these bamboo tubes on their shoulders, they would be readily admitted — with no questions asked — by the Japanese *kempetai* posted at the gates. Members of religious communities were also among my aunt's beneficiaries. In an official communication, Father John Hurley, S.J. acknowledges Miss Orosa's "gifts of food and medicines to Jesuit communities at Ateneo and Sta. Ana." Hungry or ill-nourished Manilans, subsisting on the meager and monotonous fare of rice, *kangkong* or *talinum* welcomed my Tia Mary's *darak* biscuits, "magic food," calamansi concentrate, peanut and coconut brittle, canned adobo, boiled beef, *dinuguan*, *mechado*, etc.

Miss Orosa's peacetime work, although not as spectacular as her activities during the war, was largely aimed at improving the lot of the barrio folk. In 1929, years before the program of "a well for every barrio" had been conceived, my aunt had thought out concrete and practical ways of helping housewives in remote and out-of-the-way barrios which she herself visited throughout the Philippines. Mindful of the general poverty she found in the rural areas, she prepared and tested various native recipes which, entailing little expense, contained much food value. For instance, meat being generally more expensive than fish, she prepared a recipe for fish balls. A wizard with ingredients, she could make fish look and taste like corned beef.

She also experimented on national community canning which she would have carried on a large scale had not the war intervened. Miss Orosa's Palayok Oven — perhaps her most famous and ingenious invention—was also conceived for the benefit of barrio housewives who could not afford electrical facilities. Placing a little wire and tin inside the lowly *palayok* (earthen pot), my Tia Mary could bake anything in it, from chicken to cake.

All over the country, she established 4-H — Health, Heart, Head and Hand — clubs patterned after those in the U.S. By 1924, members of these rural improvement clubs numbered 22,000 women. She founded the Home Extension Service and sent hundreds of her home economics demonstrators to the provinces to teach barrio housewives better home making, child care, meal-planning, food preparation and preservation, poultry-raising and home-gardening. Housewives learned not to throw away "darak" and "sapal" which, under Miss Orosa's tutelage, became ingredients for biscuits and coconut brittle, respectively.

Through my aunt's initiative, the purely home activities were expanded to include handicrafts and gardening, which housewives could profitably engage in during their leisure hours; e.g., the making of slippers, rugs, baskets with the use of old clothes, discarded stockings, jute sacks, and the like.

My aunt initiated cooking demonstrations in Manila and the provinces. These she conducted with the help of her home economics demonstrators, many of whom are now cooking and baking experts or caterers with pastry shops and restaurants.

It is difficult to make a complete list of my aunt's activities in war and in peace: she was a woman of tremendous diligence, industry, drive — and resourcefulness. Furthermore, much of her work was too technical for a layman like myself to justly appraise. Mr. Sulit, a scientist and her immediate assistant, and thus cognizant of its worth, writes in summing it up: "I am definitely sure that as the years go by, her monumental achievements will be cherished forever by our sons and daughters unto eternity."

Perhaps my aunt was destined from the start to render service to country and people — to prepare herself for those "monumental achievements." One of eight children of Juliana Ylagan and Simplicio Orosa y Agoncillo of Taal, Batangas, Maria had always been independent-minded even as a young girl. Her mother was widowed early, and she helped to mind the family store which supported the children and sustained them through college.

If I recall correctly, my Tia Mary told me (on that one occasion I had asked her for stories of her childhood) that she bartered rice cakes and other food items for fish at the beach which was quite close to the family house. The sea must have enchanted my aunt quite early for in 1916, defying convention and her strait-laced mother, she ran away from home and boarded a States-bound steamer as a stowaway.

She washed dishes and scrubbed floors on board ship — the kind of work she was to do through her college life in the University of Washington. As a student, she boarded with the dean of the college of pharmacy and his wife, and because she could not count on parental help, she did housework in exchange for lodgings. She also did odd jobs outside; e.g. washing dishes and scrubbing floors in restaurants, picking fruits and working in canning factories, not only to support herself but also to help other Filipino students abroad — this inspite of the fact that the dean, a kindly man, had told her that if she ever needed money, all she had to do was ask him for it. Not once, through her four-year study, did she approach him for financial aid.

So impressed were her professors with her ability and academic record that after she earned pharmaceutical chemistry, bachelor of science and master of science degrees in 1919, she became a partial pensionada of the U.S. government and was appointed assistant state chemist for the state of Washington the following year.

It was doubtless a prestigious position—no other Filipino has ever held it — but she gave it up and came home in 1922 because she felt her place was with her people. She worked with the Bureau of Science where, with only one untrained helper, she organized the Food Preservation Division. She also taught as part-time instructor at Centro Escolar University. In 1928, the Philippine government sent her to the States as a pensionada. For two years she studied commercial canning, travelling extensively and visiting over fifty different canneries in the U.S., Alaska and Europe — Holland, England, Italy, Spain and Paris. On her way home, she visited more canneries in China, Japan and the Hawaiian Islands. In 1929, she returned to the Philippines to take up her work at the Bureau of Science as chief of the Food Preservation Division. Recognizing the importance of the home extension work she initiated along with food preservation, the Secretary of Agriculture and Commerce created the Home Economics Division in 1932, transferring this to the Bureau of Science in 1934. In 1936, this became the Plant Utilization Division of the Bureau of Plant Industry, the division my aunt headed up to the time of her death.

She would not have died had she been mindful of her personal safety. For in 1944, when we were getting ready to evacuate to Batangas, my parents had begged my Tia Mary to pack up her bags and come along with us. But she was a soldier and soldiers do not leave their post. (It was only then we learned she was a guerrilla.) She was firm in her decision to stay in the city saying, "I cannot abandon my work and my girls."

I remember the last time I saw her. My sister and I were leaving for the province at dawn and my aunt, so as not to miss saying goodbye to us, had rushed down the stairs, forgetting to put on her lounging robe. There she stood in her pajamas, a sweet smile on her face, her chubby hand waving at us.

We had gone ahead of our parents and before they followed us in a few months, they again renewed their appeal to my Tia Mary that she go along with them. Her reply remained steadfastly the same: "My place is here."

Thus it was that she and a woman employe were left alone in the penthouse of our residence on Taft. Finally, they had to transfer to her office on San Andres: the streets of Manila were now swarming with Japanese sentries and it was becoming increasingly dangerous — especially for women — to walk alone even for short distances.

Those who worked with my aunt to the very end attest to her bravery and courage. Sensing that their days were numbered, Japanese army authorities made frequent visits to her office, harassing her and threatening her with bodily harm, even with death, if she kept up with her activities. She was undaunted. She carried on until she was wounded by a shrapnel and taken to the Malate Remedios Hospital where, not much later, she was directly hit in the heart by another piece of shrapnel.

As a national tribute to Miss Orosa, President Garcia declared November 29 Home Extension Day to coincide with her birthday. The proclamation was made largely through the efforts of "the girls" and of BAE Assistant Director Nicolas Peñamora.

A plaque unveiled in 1959 by Mrs. Carlos Garcia at the Maria Y. Orosa Memorial Hall (Bureau of Agricultural Extension Building, Diliman) sums up my aunt's lifework thus:

MARIA Y. OROSA MEMORIAL HALL

Dedicated to the memory of Maria Ylagan Orosa (1892-1945), *pharmaceutical chemist, home economist, humanitarian, guerrilla worker and organizer of home extension of the government, died in line of duty,* 13 *February* 1945.

REMINISCENCES

Miss Maria Y. Orosa had a powerful drive for achievement, an untiring capacity for work and an ardently sincere wish to contribute technological skills to promote man's welfare. She seemed forever on the go, enthusiastically engaged in the various tasks of thinking, learning, creating, guiding, directing, discovering and promoting along the areas of plant utilization and home extension service.

She achieved distinction and conquered the heights out of her very own diligence and perseverance, yet she was an example of genuine humility. She would relate to us how she worked and even washed plates during her struggling days in the United States. She loved to picture how funny she looked, wearing coats which were too small or too big for her, with sleeves either too high or too low from the wrists because they were all hand me-downs and give-aways. She could not afford to buy any.

She would always meet the field worker with a radiant smile and an inspiring word of welcome. She was a disciplinarian, exacting in her assignments, yet had that warmth of personality which drew us to her and the dynamic power to spur us to give the best in us.

She had a sparkling wit and humor. I used to hear her say in some of her speeches, "One characteristic which is very much desired of an applicant for the position of a Home Demonstrator is good looks. Look at my girls. They are all pretty. Is it not an irony that I, the chief of the Home Demonstrators, cannot be called beautiful?"

To her, home extension service was the noblest calling, and accordingly, she regarded her home demonstrators as the best of girls. She would always extol our praises so lavishly that, deriving from her words a deep sense of security and faith in ourselves, we would be ready to meet greater challenges.

AMADEA E. MEDINA
Chief, Home Economics Program Division
A. P. C.

MEMORIALS TO MARIA Y. OROSA

The great Maria Y. Orosa is gone but her influence remains. In the Philippines today, homes continue to preserve and utilize fruits and vegetables in season; homemakers prepare nutritious meals for their families; home gardens blossom into landscaped gardens; crafts develop into home industries; canning leads to more and more factories; food utilization turns out many interesting by-products. Such are the results of Maria Y. Orosa's years of intensive scientific researches, painstaking educational endeavors and indefatigable missionary dedication to service.

Her numerous friends, co-workers, admirers and sympatizers have on several occasions, year in and year out, perpetuated her memory through the work she had lived and died for, extending education for the upliftment of the Filipino family and home. This group functioned into a Maria Y. Orosa Home Extension Movement ((MOHEM) with the assistance of the Bureau of Agricultural Extension now the Agricultural Productivity Commission. As a result, the group, whose members are informally known as the "Orosa girls", is credited with the following contribution to the field of home extension:

1. Presidential Proclamation No. 129 recognizing November 29th, the birthday anniversary of Maria Y. Orosa, as National Home Extension Day. This day is being celebrated in every province under the auspices of the Rural Improvement Clubs with the cooperation of the provincial extension service.
2. A Maria Y. Orosa Hall, comprising the whole fourth floor of the present Agricultural Productivity Building, was dedicated to her and named in her honor. This hall was completely furnished and equipped by private individuals many of whom chose to remain anonymous, for the chief purpose of extending educational facilities, in the form of free demonstrations, to the public. Earlier, a memorial building was also dedicated to the late Maria Y. Orosa at the Bureau of Plant Industry in 1950.
3. Monthly cultural demonstrations were initiated in the Maria Y. Orosa Memorial Hall to make Rural Improvement

Club members, staff and employees up to date with progressive trends. The following demonstrations, accompanied with lectures and exhibits, can be cited: Flower Arrangements, The Food of the Future," CHLORELLA", Food Preservation By Drying, Plant Arrangement, Cultural Presentation on Drama, Cultural Presentation on Interior Decoration, Plant Exchange Day, "Singing is Everybody's Business", Practical Gadgets for Homemaking. Homemaking in Finland, and various cooking demonstrations.

4. Home Extension Day celebrations have contributed the following achievements in the field of home extension as a result of contests conducted among Rural Improvement Club members:

a. "New Rice and Corn Recipes." Contest on the utiliza-utilization of rice and corn produced original preparations

b. "Practical Gadgets for Homemaking." A publication of the prize winning gadgets is the result of this contest. (1960)

c. "Plant Arrangements". The trends in the use of plants for the home were set as a result of this contest which included the following phases: window gardens, rock gardens, aerial gardening and dish gardens.

In the United States, the Department of Agriculture, as well as various universities and research laboratories have given credit to Maria Y. Orosa's great achievements. To cite two such cases:

1. While visiting the University of California in Berkeley, I was shown the Food Technology Laboratory where I met a well known food technologist, Dr. Kruze. Upon seeing me, he instantly recalled: "A Filipina once came to observe in this laboratory but instead she did experiments and surprised me with the first frozen mangoes from the Philippines." He fondly recalled Maria Y. Orosa and her wonderful achievement. At that time, freezing was still unknown.

2. On a visit to the University of New Mexico Cooperative Extension Service, I was surprised to find that they were very much aware of the Extension Service in the Philippines. After my visit, an Extension Magazine of the University was

sent to me. To my biggest surprise, I found therein an article with a picture of the late Maria Y. Orosa, founder of Home Extension Work in the Philippines, associating it with my visit. — *Aida Fabiero Abaya*

Nov. 13, 1969

PALOMARIA-MARIA Y. OROSA MEMORIAL TREE

The Palomaria (*calophyllum Inophyldum Linn*) has been chosen quite appropriately as the Maria Y. Orosa memorial tree. *Palo*, the Spanish word prefixed to Maria, means pillar. The tree itself is widely distributed all over the Philippines, growing to a stately size and height. It is remarkable for its reliability as refuge and defense against violent storms. The seeds yield oil for soap making and in small districts it is used as illuminants, and the hard thin rounded shells used as containers of buri sugar sold as confection. It is indeed a versatile tree.

The Palomaria tree was planted in her honor, November 28, 1960. It is a strong reminder of the meaning and magnitude of her services to our people and the obligation that belongs to every generation to continue the fulfillment of her dream: Home Extension Day on the March. (Significantly on this day, the vigil light out of the Palomaria oil will be lighted as a symbol of her wisdom that will continue to burn forever.)

— *Benedicto Leaño*

In 1929 Maria Y. Orosa started organizing women all over the country — some 22,000 at the very start — into clubs, called 4-H Clubs. Health, head, hands and heart were of Orosa adaptation and she gave them to the women for their cue as the power behind the individual family, the center of all life in the community.

— *Paciencia Torre Guzman*

RE-NAMING FLORIDA 'MARIA Y. OROSA STREET'

by Commissioner Francisco Saguiguit

Agricultural Productivity Commission

This very significant occasion this morning has a historic bearing on the lives of the working women in this country, particularly those in the home extension services of our government. I have no doubt whatsoever that the late Maria Y. Orosa's name is a byword in every phase of work designed for nation building and rural development in this country and there is little that a man like me can add to praises that have been lavished upon this great woman.

Perhaps, I can best give meaning to this ceremony by speaking for the more than 1,000 home management technicians and supervisors of the home economics program division of the Agricultural Productivity Commission and the 43,516 members of the 1 668 rural improvement clubs and 10,733 participants of 472 homemakers classes under the sponsorship of this division who is the heir of the legacy of Maria Y. Orosa. I am sure that in the hearts of these women and the countless others in the home economics profession today are unspoken gratitude for the honor that the city of Manila has bestowed upon their hero and model.

This occasion is, indeed, very significant in the sense that very few women in our history have been credited with the naming of a street. To the followers of Maria Y. Orosa, this street will be more than just a thoroughfare, but it will symbolize the service that this great woman has started. Just as home extension is the key to the enlightenment of the rural women to promote better homes and communities, this symbol of this street would encourage women to open new ways for the upliftment of this country.

Today, the woman plays a bigger and a bigger role in almost everything that the man is suppose to do. In fact, at times we are apt to say that this is a woman's world or that behind a pushing man is a pushing woman. While there are exaggerations of the mind, yet they depict the real place of the women in our world today.

However, let these facts be not a cause for apprehension among the male population but rather let them be a promise of life, there is no doubt that man will soon have a dependable farmer.

In our work of increasing food production and rural development, today, we have learned to recognize the work of the home extension officers. For instance, our home management technicians not only help women to conserve the surplus food on the farm, improve the quality of the food or put up better homes for the family, but they must also take part in the preparation of programs for rural development. In our land reform areas, our H.M.T.'s assist housewives and farmers to prepare farm and home budgets.

The naming of this street to honor a great woman is a milestone in the home extension service of the country. Before all the officials of the city of Manila and the people who have made this occasion possible, I reiterate in behalf of the women in the home extension service of this country, our appreciation and thanks.

Brief Biographies of Maria Y. Orosa

Maria Y. Orosa, Pharmaceutical Chemist, Home Economist —Bituin San Agustin
My Sister Maria — Dr. Sixto Y. Orosa
Bread and Rice — Yay Marking Panlilio
Maria Y. Orosa, Food Nutritionist — Valentin Loyola
Maria Y. Orosa — Paciencia Torre Guzman
Foremost Food Researcher — by Sol Gwekoh — Hall of Fame, Manila Times

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Editorials on Maria Y. Orosa on her twentieth anniversary appeared in the:

The Manila Times
The Philippines Herald
The Manila Bulletin
The Manila Chronicle

November 29, 1965

RESOLUTION

Sponsored by Councilor Mariano Magsalin. Approved by Mayor Antonio Villegas and the Municipal Board.

WHEREAS, Miss Maria Y. Orosa was the Philippines' pioneer and foremost food specialist and food chemist;

WHEREAS, Miss Orosa was the country's pioneer in Philippine food utilization and preservation, having been the first to can Philippine food and likewise the first to extract wine from Philippine fruits;

WHEREAS, Miss Orosa was the first to organize Four H Clubs and rural home extensions in the different provinces, towns and even the remotest barrios throughout the Philippines where she and her Home Economics supervisors taught rural housewives cottage industries such as the making of slippers, baskets, clothing, etc. from native materials; and taught them how to prepare nutritious and balanced meals from inexpensive and locally available food items whose prices were well within their reach;

WHEREAS, Miss Orosa pioneered in Manila and in the provinces in the advocacy of well-balanced meals (from Philippine foods) as a safeguard to the nation's health, preparing countless recipes which she or her home demonstrators kitchen-tested under her personal guidance to enable housewives to prepare such balanced meals, which recipes are now adapted by recipe book compilers all over the Islands;

WHEREAS, Miss Orosa deviced, with typical ingenuity, the now famous Palayok Oven which enables the poor people to bake cakes and other foods in humble homes;

WHEREAS, Miss Orosa, realizing the great need for food, during the lean and hungry years of the Japanese Occupation, utilized and exhausted all her know-how in food utilization and preservation and, thereby, with her usual resourcefulness, extracting food even from what was hitherto considered waste products such as darak which she turned into Vitamin B-laden biscuits, or discovering various medicinal uses in ordinary food items such as soya bean which she converted into "magic food" for the acutely under-fed and under-nourished;

WHEREAS, feverishly working all day and far into the night, and harnessing all available human power in the Bureau of Plant Industry, she was able to supply sorely needed food to thousands of civilians including the internees;

WHEREAS, Miss Orosa stoutly refused to evacuate to her home province of Batangas even upon the insistence of her family and friends because she could not bring herself to abandon her work, her employees and the hundreds of students stranded in Manila by the war;

WHEREAS, carrying on undaunted as tension, fear and anxiety among Manilans had reached their peak, she could not be cowed by armed Japanese sentries who tightly guarded the streets through which she had to pass daily on her way to work, or who subjected her periodically to unrelenting and rigorous threats and questionings in her office in San Andres, Malate;

WHEREAS, refusing to rest even after she had been wounded, she preferred to go back to work so she, holding the rank of guerrilla captain, could continue to contribute her valuable behind-the-scenes activities to the country's cause;

WHEREAS, Miss Orosa was killed in line of duty in Malate Convent on San Andres Street, a heroine sworn to the cause of her country, with no thought of her own safety or comfort;

WHEREAS, Miss Orosa exemplified the finest traditions of Filipino womanhood — having surmounted with grit and determination the obstacles of a home bereft of a father early in life and thus left with limited resources; and having demonstrated not only to her superiors and subordinates but also to the nation at large the qualities of honesty, integrity, tact, humanity, intelligence, generosity, courtesy, industry, diligence, perseverance and unswering nationalism;

WHEREAS, in her final hour, Miss Orosa answered her country's greatest challenge in a manner that will always be a shining light and unfailing inspiration to Filipinos of every age and clime—

BE IT RESOLVED, therefore, that the street named Florida in Malate, Manila, be permanently renamed MARIA Y. OROSA in order to perpetuate her memory among the people she loved and served with exemplary devotion and dedication.

FOR THE RECORD *

MARIA Y. OROSA — by Lyd Arguilla

She was gallant, she was brave. To know her was to be on intimate terms with generosity itself.

Her close friends called her Mary. To the guerrillas she was that mysterious somebody called "Anggue" (nickname for Maria), or some person with the code name, "Ready, Willing and Able," who kept sending up to the combat units bags of concentrated food that many a time had saved their lives.

Manilans will remember her powdered Magic Food which she prepared from soya beans in her capacity as chief of the Utilization Division of the Plant Bureau. In the lean days of the Japanese occupation this food found its way in American internment camps and private Filipino homes with growing children, to supplement a diet sorely deficient in nutrition.

I remember what she answered when approached to help the guerrillas: "Oh course. What do you want me to do? What can I contribute? I'm ready, willing and able."

And she contributed without stint. She gave money. She gave concentrated food and candy from the distributing store of the Utilization Division which she had to pay out of her salary.

Was there ever any friend who approached her for help and whom she turned down? I do not think there had been any. But as she was an excellent friend so she was a bitter and uncompromising enemy.

"Tell me," she used to say, when I'd visit at her office to slip a gucrilla note into her hands or to "touch" her for guerrilla contribution, "what will these men in influential offices become when the Americans come back?"

I said, cynically, they'd probably be able to explain their actions away.

"But what about the speeches they make? How can they explain those away? If a man keeps quiet you can only guess what he thinks. But when he speaks he expresses what is in his mind and which you cannot know until he tells you. If you cannot believe what a man says, what can you believe?"

If she had been alive today she will probably be the most

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* LIGHT, January 5, 1946.

assiduous and fervent denouncer of traitors and collaborators. She was uncomfortable even at the thought that she was employed in the government. She said it was true that she did not have to deal with the Japanese in her work. But the government was a puppet government. Did serving under it make her a traitor?

Those who did need her where she was, and that included Americans, and myself, and the guerrillas told her she was alright. That she was being more useful where she worked than if she went out, let us say, to buy and sell. That she was not serving the Japanese but her own people. I remember the bottles of calamansi syrup she was able to send thru me to the USAFFE prisoners of war; the soy sauce, papaya ketchup, peanut brittle and other foods processed by her division which helped make tolerable to the housewife the shortage of food products in the markets besides furnishing a means of livelihood for a goodly number of otherwise jobless women and girls.

Indefatigable, full of optimism and enthusiasm, she pushed thru experiment after experiment in food, with her capable and loyal assistants, all of whom I believe derived inspiration from her leadership.

I think of her and find words inadequate to describe that utter sense of loss which realization that she is dead gives me. Others who knew her as well as I did must feel the same way. For it is possible to contemplate with philosophical equanimity the fact that in a war there are those who die, but why she? Why one so true and loyal and so gifted? She had so much to give the world and humanity.

My sister, Remedios, tells me that a month before the liberation, she was with Maria Orosa at the latter's office. Mary showed my sister a letter I had written from the mountains asking her to get out of the city. I'd said something about street fighting being inevitable with Japs having hidden installations behind civilian skirts. I'd say bullets can pierce walls, shrapnel not choosing victims between Japanese or Filipinos. That I wanted to keep her and all my dearest friends for the victory lechonada after the war. She had not made up her mind what to do. Should she get out and leave her job and the girls? She had a post to keep. She kept it. And fell victim to a Japanese bayonet in the Rape of Manila.

Chapter I

SOME OUTSTANDING RESEARCH STUDIES OF THE LATE MARIA Y. OROSA

Miss Orosa's research studies are many and some of them may be enumerated as follows:

1. Utilization of Philippine fruits in the manufacture of fruit wines;
2. Manufacture of fruit jellies from guava using tamarind, santol, calamansi and other sour fruits as the source of acids;
3. Manufacture of toyo from soybeans and other beans, including copra;
4. Studies on the preparation of nata de piña and utilization of its by-products in the manufacture of vinegar. Note: Before Del Monte ever thought of making vinegar from pineapple, Miss Orosa had been making it even before World War II.
5. Utilization of native vegetables in the manufacture of sweet-mixed pickles;
6. Utilization of powdered soybeans in the manufacture of magic food;
7. Studies on the preparation of soy bean milk;
8. Studies on the preparation of jams, jellies and marmalades;
9. Development of a palayok oven;
10. Studies on the preparation of American bread with varying percentage of cassava and wheat flour;
11. Preparation of bread, cookies and cakes from native flour;
12. Utilization of powdered green *saba* banana flour for baking;

13. Utilization of dried candied fruits in the preparation of fruit cakes;

14. Preparation of cookies from cassava starch;

15. Preparation of calamansi concentrates from calamansi juice;

16. Studies on the preservation of various fruit juices;

17. Studies on the preparation of dehydrated fruits, such as mangoes, santol, and vegetables;

18. Studies on the canning of ripe carabao mango and utilization of its by-products;

19. Studies on canning fish and meat;

20. Studies on the preparation of dehydrated shredded beef:

21. Studies on the preparation of fish balls;

22. Studies on the preparation of agar from seaweeds (gulaman-dagat);

23. Studies on the preparation of dehydrated preserved fruits;

24. Studies on the preparation of frozen fruits, such as mango, papaya, etc;

25. Studies on the utilization of coconuts in the preparation of the following:

    1) Flour
    2) Breakfast food with cassava flour
    3) Coco-honey
    4) Milk
    5) Nata de coco
    6) Vinegar
    7) Soup
    8) Cheese and butter
    9) Culinary cooking oil
    10) Pharmaceutical vehicle
    11) Candies
    12) Salad oil, etc.

26. Studies on the utilization of meat and poultry in the preparation of the following:

    1) Adobo
    2) Canned boiled beef
    3) Dinuguan
    4) Mechado, etc.

27. Studies on the preparation of native food recipes;

28. Studies on the utilization of peanuts in the preparation of the following:
    1) Candies
    2) Salad oil
    3) Culinary oil
    4) Butter
    5) Flour, etc.

29. Studies on the preparation of concentrated canned food for the Army;

30. National Community Canning in the rural areas;

31. Practical method of determining rotenone from derris roots;

32. Extraction of nicotine insecticide from tobacco dust and tobacco waste material;

33. Determination of food values of agricultural products and by-products;

34. Studies on the pickling of cucumber and green tomatoes;

35. Studies on the preparation of saba banana, camote and potato chips;

36. Studies on the preservation of macapuno preserve;

37. Studies on the mechanization and preparation of toasted kasoy nuts;

38. Studies on the preparation of soybean curd and utilization of the by-product soybean flour for bread and cookies-making;

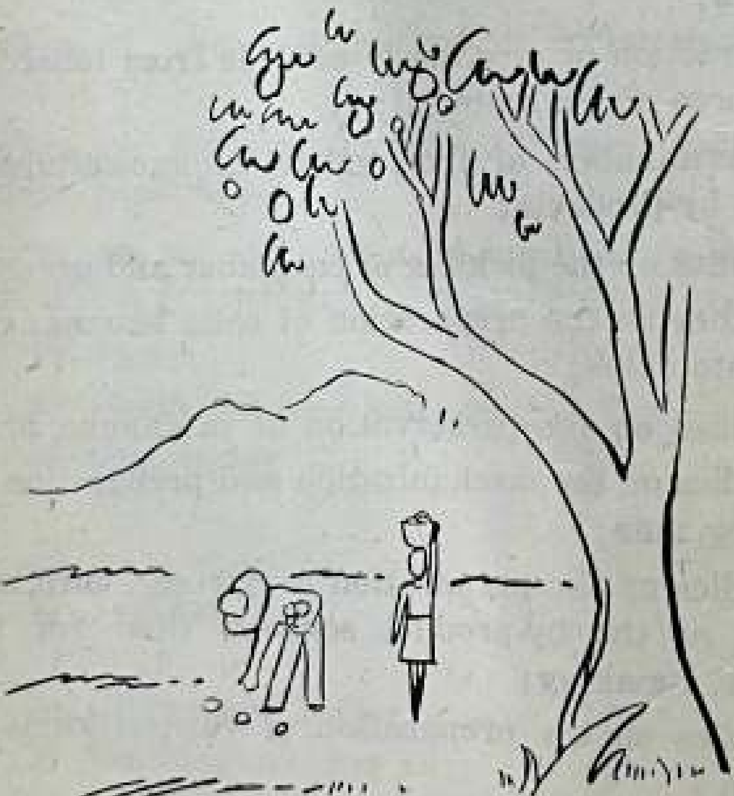
39. Studies on the preparation of various kinds of catsup from
    1) Banana
    2) Mango
    3) Ripe tomatoes, etc.

40. Studies on the natural preservation of fruits and vegetables in solution for display purposes;

41. Studies on the utilization of papaya, guava and corn and their food values;
42. Preservation of various canned nuts with the aid of a vacuum;
43. Utilization of rice bran as food rich in vitamin B1 or thiamine;
44. Studies on the preparation of various recipes that are cheap but rich in food value.*

"Miss Maria Y. Orosa was born a hundred years ahead of her time."

Jose I. Sulit



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* From the files and records of Mr. JOSE I, SULIT, Immediate Assistant Chemist of the late Maria Y. Orosa, Oct. 27, 1960.

Chapter II

PRESERVATION OF PHILIPPINE FOODS

By Maria Y. Orosa

INTRODUCTION

Although it has long been the practice among American and European housewives to preserve fruit, vegetables, and some meat and fish at home, to the majority of Philippine women food preservation is unknown. It is astonishing, indeed, and almost inexplicable that this valuable home industry has not received its attention when it is considered that consumption of preserved foods in the Islands is large and that there is available a great abundance of foods to preserve. Many Filipinos are fond of canned foods and those imported, such as peaches, grapes, lichees, asparagus, etc., which are considered delicacies and are much in demand, in spite of their high cost. Canned salmon and sardines are consumed everywhere, particularly in places inland, where the supply of fresh fish is very limited. The importation of preserved foods amount to several million pesos annually.

Fruits, vegetables, fish, and other fresh food materials abound in the Philippines. A large portion of these go to waste. In Calibo, Iloilo, and other places where pineapples are raised for the fiber, truckloads of the fruit are left in the fields to decay. In other places, where transportation is still a problem, most of the fruits and vegetables unconsumed are left untouched.

Probably the reason why this important industry has been neglected is the great variety and abundance of fruits and vegetables raised in the Philippines, so that at least several kinds are in season all the year round; the most important reason, however, is the lack of technical know how. Because of the latter reason it is the object of this publication to explain in brief the general principles of food preservation and to advocate such preservation in the homes in order to utilize the fresh foods that now go to waste, and thus decrease the importation of preserves.

By preserving native foods at home Philippine women would be doing a valuable service to their country; for should food preservation be practiced throughout the Islands the benefits that could be expected to accrue to the country would be manifold. A few are here mentioned.

1. It would stimulate agricultural development by causing more fruit trees to be planted.

2. It would give profitable work to idle hands.

3. It would improve the general health of the people by supplying a more varied and balanced diet.

4. It would prevent the waste of perishable foods.

5. It would help mothers in building up happier and better homes.

6. It would stabilize prices by equalizing the food supply.

7. It would enable the people to save the surplus products of one locality to sell to other localities where there is a shortage.

9. It would tend to lessen the amount of imported food products which could easily be produced here.

10. It would help to make of the Philippines an economically independent country, instead of a country dependent upon others for a large part of its food supplies.

Food preservation began with the caveman and on its success depends mankind's ability to live a civilized life. Consequently, much thought and energy have been expended on this problem of food preservation, for it was soon learned through bitter experience that all food products which were not protected in some manner soon spoiled and decayed and returned again to the earth. Gradually the various ways possible to preserve food for edible purposes were worked out and now this knowledge is available to any one who will spend a little time and energy in study, for the subject is not complicated and really can be summed up in a few words. Water is the one great factor in the spoiling of food; therefore, to prevent this the water must either be taken away (the food dried, in other words), or else other means must be found to keep it from acting with the minute plant and animal life, everywhere present, that causes food to decompose.

Principal Methods Used In Food Preservation

A. *Drying* — Drying is probably the first known method of preserving foods. It is simple, easy to perform, needs but little apparatus, and is applicable to many kinds of food. The principle involved in this method is the reduction of the water content of the food to prevent it from spoiling. After the moisture is removed, the food product is stored in such a way as to prevent it from absorbing moisture.

General Methods Used In Drying

1. By sunshine, where the food is usually sliced, spread on a suitable container, a piece of mat or a tray being commonly used, and exposed to the sun to dry.

2. By artificial heat, where the material is dried by exposure to the action of hot air in an oven or in a specially constructed drier.

3. By air blast, where the food is dried by means of a fan driven by electricity, alcohol, or kerosene. This method requiries about twenty-four hours for drying fruits, and a few hours for drying some vegetables that are not very rich in water content, such as string beans, peas, etc. Foods that are fan-dried should be heated in the oven a few minutes before storing.

Certain apparatus is required in food dehydration, where the food is dried by heated air. This is the best method of all.

B. *Smoking.* — This is a method which is usually used in preserving fish and meat. The food is first salted and then exposed to smoke produced by slowly burning saw dust or shavings of one of the many Philippine woods. The preserving chemicals present in the smoke prevent the growth of bacteria, aided by the drying which generally goes on at the same time.

C. *Salting.* — This method is one of the first known and practiced here. It is applicable to both vegetable and animal foods. When the salt comes in contact with the product the water content is drawn out and the salt enters the tissues, thus making the food firmer and preventing decay. The two most important methods of salting used are —

1. Dry salting, where the food is first mixed with salt to remove a large amount of the moisture and then dried.

2. Brining, where the food is packed in a container and covered with a solution of salt (brine) until used.

D. *Pickling.* (In condiments). — Pickling is usually applicable to foods that do not have much taste in themselves. Pickles are usually preserved with vinegar and condiments. These act as preservatives and at the same time give delicious flavor and odor to the food.

There are two methods of pickling in general use, namely:

1. Simple pickling, where the food is prepared, salted, and preserved with vinegar and other condiments. These ingredients both preserve the food and give it a better taste. Sugar is added to the vinegar when sweet-sour pickle is desired.

2. Fermented pickling is accomplished by curing the food with salt and allowing the lactic acid fermentation to develop for a few weeks.

The following spices are used in these methods: vinegar, black and white pepper, cinnamon, cloves, all-spice, nutmeg, yellow mustard, celery seed, caraway, coriander, cayenne pepper, turmeric, and bay leaves.

E. *Sterilization* — Foods spoil, ferment, or decay because of the growth of living microscopic organisms called germs. These are the molds, yeasts, and bacteria, all plants of very low order. In canning, sterilization (that is, killing or destroying all germs) is most essential and is accomplished by heating. Molds and yeasts are destroyed at, and even below, the temperature of boiling water; but bacteria, due to their spores, are not completely killed by boiling water unless the food containing them is boiled for a long time, say five hours, or else about an hour for three successive days. Since air, water, and food contain germs, complete sterilization is very necessary to assure the preservation of foods.

The few commonly used methods of sterilization are:

1. By cooking the food directly over the fire, then placing it in sterile jars and sealing them hermetically.

2. By boiling water, where the jars containing the food are placed in a boiler, the jars covered with water and the water boiled for a certain length of time, depending on the kind of food to be sterilized.

3. By the use of the air oven, where the food is packed in jars and placed in an oven of carefully regulated temperature. The oven can be heated either by gas or by electricity.

4. By the use of a steam oven. The bottom and sides of the oven are so arranged that the filled jars, covered but not tightly sealed, placed in it to be sterilized come in contact with steam only.

5. By the use of a pressure cooker. The steam pressure cooker consists of a vessel provided with a pressure gauze and safety valve, allowing a pressure of from 5 to 30 pounds, per square inch, to be placed on the sealed jars to be sterilized. This not only completes the process quickly but also cooks thoroughly in a short time vegetables and other foods that, under ordinary conditions, require long boiling.

F. *Sugar.* — The preservation of food with sugar is also common. Syrup in sufficiently concentrated form acts as a preservative and food products can therefore be preserved either in dry sugar or in syrup which is made by dissolving the sugar in water. In both cases where excess sweetness is to be avoided sterilization, in addition is necessary. When fruits are preserved with much sugar they are known as jelly, marmalade, jam, candy, butter preserve, etc., according to their form and the method of preparation used.

Methods of Canning

There are several methods used in canning, namely:

Cold-pack method: The food is packed in jars or cans, covered with hot syrup or any other suitable liquid, the jars partially sealed and sterilized completely, and after sterilization sealed completely and the cans exhausted until the center reaches a temperature of about 85°C, the cans sealed hermetically, sterilized completely and cooled in cold water.

Hot-pack method: The raw material is cooked in an open vessel and immediately packed in sterile jars and sealed completely.

Fractional or intermittent method: Food is packed in suitable containers, sterilized for one hour every day for three successive days.

Vacuum seal method: Food is packed and sealed in specially-made vacuum containers, generally jars or cans, using special type of machinery to accomplish the sealing. The container is sterilized after sealing. This method is an expensive one and involves special machinery and special type containers.

The most popular of the methods mentioned is the cold pack because it is simple and very convenient. Besides, in the cold pack method, one can arrange the fruit or vegetable attractively in the jar before the products undergo any cooking. The cold pack method is the most widely used not only because it retains the flavor and shape of the fruit or vegetable better, but it has also proved to be the safest. Next in popularity is the hot-pack method. With this method, very little attention can be given to attractiveness in the arrangement of the product in the container since the food is boiling hot when it is transferred to the container. Besides, the fruit has undergone cooking and consequently become greatly impaired in appearance. Small, soft fruits like berries, mash up during the cooking and lose their shape. Aromatic fruits lose part of their flavor when cooked in an open tank.

Authorities in canning agree that fruits and some vegetables retain their flavor better by the cold pack method.

Some factors that influence the quality of a canned product:

The quality of a canned product greatly depends on the quality of materials employed. If a white, clear syrup is desired, only refined sugar should be used. For a uniformly excellent taste and appearance, fruits, used should be of the right maturity, and of uniform size and color. Packing immature fruits with ripe and over-ripe ones will not make for a uniform taste or attractive appearance. Sort the fruits for degree of ripeness as well as for size. Not only will fruits of different sizes look unattractive but the small ones will be overcooked, fall to pieces and mash, making the syrup cloudy, while the large pieces may be undercooked and cause fermentation.

Very few Filipino consumers of canned fruit products are familiar with the different grades of canned goods such as fancy, choice standard, second grade and pie grade. The women buy the brand and perhaps the beautifully-labeled packages. The right kind of containers also influence, to a certain degree, the quality of the canned product. First-class materials packed in cheap, ugly-looking containers will greatly lower the selling property of the product.

UTENSILS AND MATERIALS

The utensils needed for home canning and the equipment used in semi-commercial and commercial canning widely differ. Since this article is intended to help the homemakers, the home equipment will be discussed.

The following utensils are needed.

1. Stainless steel paring knives
3. Long handled spoons and laddles
4. Wash pans, aluminum or porcelain lined
5. A measuring cup
6. A set of measuring spoons
7. A colander
8. A dipper
9. A sauce pan
10. A wide mouthed funnel
11. A spatula
12. Pieces of cheese cloth
13. Two holders
14. Hand towels
15. A working table
16. A stove
17. A water sterilizer
18. Preserving cans
19. Preserving jars

CAN SEALER AND CANS, CLEAN WATER, ETC.

A hand can sealer and empty cans are needed if cans are used in preference to glass jars.

A supply of clean water, sugar, salt, and spices are needed in canning fruits and vegetables.

AVOID IRON UTENSILS

The use of iron utensils should be avoided because fruits and vegetables containing tannin will react on the iron imparting a metallic taste to the product and producing a black discoloration.

FOR ACCURACY

For more accurate canning, a thermometer, a balling, baume, cylinder, sacchorometer, salometer and a rough balance are needed.

KNIVES

The paring and butcher knives should be of stainless steel for ordinary iron knives impart a black color and give a metallic taste to the fruits rich in tannin. Stainless steel knives besides, are easy to clean and to sharpen and are long wearing.

WASH PANS

Wash pans may either be aluminum or enamel lined. The aluminum pans are more expensive than the enamel lined pans but are more durable. The enamel-lined pans chip easily and expose the iron of the pan which discolors the fruits and some vegetables upon contact.

MEASURING CUPS AND SPOONS

Aluminum standard measuring cups and spoons are obtainable from almost all hardwares stores at very reasonable prices.

COLANDERS

Colanders are used for draining and blanching fruits and vegetables. There are different types of colanders in the market. Some are porcelain lined and others are of aluminum. Those with a handle are very convenient for blanching and the other type is very suitable for draining. Bamboo baskets may satisfactorily substitute the aluminum or enamel lined colanders. "Bistay" or bithay" and coarsely woven baskets are very satisfactory for draining and blanching fruits and vegetables respectively.

DIPPERS

Dippers are very useful in transferring hot liquids or semi-liquid products from one container to another, such as in transferring boiling syrup or brine from a sauce pan to the jar. Dippers with lip are most convenient to use although coconut shell provided with a handle may be used.

SAUCE PANS

A sauce pan or two are indispensable for the making of the syrup. There are aluminum or porcelain lined pans of different shapes and sizes but those with a flat bottom are preferred over the others for they do not tip so easily and the loss of heat in cooking is less.

WIDE-MOUTHED FUNNEL

A wide mouthed funnel is important particularly in the preparation of jams, marmalades and preserves by the hot pack method. Wide mouthed funnels are obtainable in almost all hardware stores.

SPATULA

A stainless steel spatula is needed in removing air bubbles after filling the bottle with either fruit and syrup, vegetable and brine, or jam, preserve, or marmalade. This may be substituted with a homemade bamboo spatula which serves the purpose very satisfactorily. The bamboo causes no reactions with fruit juices and does not impart any disagreeable taste to the product. In making a bamboo spatula, use the outer side of the bamboo for it is more durable and could be made as thin as desired.

CHEESE CLOTH

Pieces of clean cheese cloth are needed for filtering the syrup and drying the utensils. They should be washed with soap and water and dried in the sun immediately after each use. Dirty pieces of cheese cloth contaminated with syrup and fruit juices scattered around attract ants, flies, and ordinary flies which make the place very unsightly, and unsanitary.

HOLDERS AND HAND TOWELS

Holders made of pieces of cotton cloth or flannel are needed in holding hot bottles or kitchen utensils. When the jars containing the preserve are sealed completely after sterilization or after exhausting them, these holders are indispensable. Holders should be kept clean and dry.

Hand towels are needed for wiping the hands. Dish towels should never be used for the hands.

WORK TABLE

A work table made of tañguile or lawaan wood is satisfactory. If canning is to be done regularly in the kitchen, a table with shelvings is very satisfactory. The table should be of the right height to allow the housewife to work in her natural position instead of stooping if the table happens to be too low, or raising her arms unnecessarily if the table happens to be too high, thus getting tired in a much shorter time than if she worked in her natural position.

STOVE

A gas, electric, coal or wood stove may be used. Many people however, still depend on wood for fuel and a limited few on coal oil, coal, or charcoal. For ordinary canning where a water sterilizer is to be used, a native stove is satisfactory.

WATER STERILIZER

A water sterilizer may be made from any boiler which is high enough to hold the rack and jars in their natural position and allow about an inch space from the top of the water which is supposed to cover the jars to be sterilized. An empty gasoline can provided with a cover is about the most practical and the cheapest that could be used as sterilizer. It should be provided with a rack made either of bamboo, iron, or wood to hold the jars so they will not come in contact with the bottom of the boiler, as too high heat will cause breakage. The rack should be held far enough from the bottom of the boiler to permit free circulation of water underneath the jars so the heat will not be localized at the bottom of the jar and consequently break it.

The rack should be constructed in such a way that the jars will be held in place during the sterilization period, to prevent them from bumping against each other. It should also be provided with handles so as to avoid the use of bottle holders or bottle lifters. These lifters are long iron tongs especially devised for lifting out bottles.

Failure in canning is sometimes due to defective rubber rings. Rubber rings should be used only once. Good rubber rings can undergo the following tests: They should stand a few hours boiling; not crease when bent, doubled and pinched; stretch when pulled in opposite directions and return to the original size when force is released; that is, they should be elastic, not stiff.

GENERAL INSTRUCTIONS FOR USING A WATER STERILIZER

1. Place the rack at the bottom of the sterilizer.

2. Place enough cold water in the sterilizer to cover the jars when they are placed on the rack in their normal position.

3. Heat the water to about 40°C and place the jars on the rack after filling them with fruit and boiling syrup or vegetable and boiling brine.

4. Adjust the water in the sterilizer so that the jars are completely covered.

5. Place the cover on the sterilizer.

6. Continue heating until the water boils.

7. Lower the fire to just keep the water boiling.

8. Count the time of sterilization from the time the water begins to boil.

9. Put out fire after sterilization.

10. Lift rack on which the jars rest or lift bottles individually with a bottle holder.

11. Seal screw jar completely, cool in an inverted position, and examine for leaks.

PREPARATION FOR CANNING IN JARS

Before starting to can, one must be sure that all materials needed are ready and clean.

The surroundings should be clean, dry, and free from dust. There should be an abundant supply of water and fuel. The working table should be scrubbed and dried and on it should be placed the utensils that will be needed for that occasion — pans, spoons, measuring cups, and towels should be ready and within easy reach. The knives must be very sharp. Hot water should be available all the time.

Jars.—Carefully examine and test jars by running the finger around the edge of the neck, sealing shoulder, or the space provided for the rubber ring, depending on the make of the jar, and if any sharp projections are noted, file smooth, for if left sharp they may cut the rubber rings and hence not make a perfect seal. The tops should be tested, those that rock should not be used. Examine for cracks, for a jar with even a small crack will break when hot syrup is poured into it. They should be thoroughly cleaned and, if canning is to be done by the hot pack method, should be completely sterilized before they are used.

The best glass jars are the most economical, for good jars do not break easily and, if properly handled, last indefinitely. There are many kinds of jars in the market. They come in various sizes; namely, gallon jars; quart jars; half-quart, or pint, jars; and half-pint jars. The gallon jars are hardly ever used, because it is difficult to sterilize them. The half-pint jars are also hardly ever used.

The *double seal jar* is a wide-mouthed jar with a glass top that is held in place by a simple wire spring. Failure in canning when these jars are used is mostly due to defective rubber rings. These jars are preferable over others because the tops, being of glass, can be used repeatedly and they last as long as the jars, although much care is needed in handling to prevent them from breaking; the tops of other jars, usually of metal, are easily attacked by the acid in the fruit.

The *mason jar*, usually narrow-mouthed, has a screw top of metal usually lined with enamel or glass, and this makes a hermetic seal when screwed down on the rubber ring. These jars are about the cheapest on the market although, in the long run, they may be very expensive for the tops, being of zinc, easily corrode when they come in contact with the acid fruits and hence need to be changed frequently.

The *removable clamp and glass top* is a glass cover which is pressed down on the rubber ring by the wire clamp as soon as the jar is removed from the boiler or oven. When the jar cools the clamp is removed and the top stays in place because of the vacuum in the jar. Loosening of the top on standing indicates that the contents of the jar are fermenting.

The *jars with metal lacquered tops* do not require rubber rings. Around the edge of the top runs a groove filled with a compound like rubber which, by the heat of the jar during canning, melts and forms a seal, as it hardens on cooling. The clamp is placed while the jar is hot, and removed when cold. A new top is required every time one of these jars is used, as the only way to remove the top is by puncturing it.

Tin cans are employed for canning on a commercial scale, but for home canning glass jars are mostly used for the reason that, although they cost much more than tin, they are cheaper in the end, for they can be used repeatedly for many years, while the tin cans can be used only once. Another advantage which the glass jars have over the tin cans is that the product inside is seen through the glass, while that in the tin can is not; also, the glass jar is not exposed to the danger of being attacked so that the product inside sometimes turns black, and if sufficient tin is dissolved in the liquor tin poisoning may result from eating the product. The latter disadvantage is partially overcome by using lacquered cans, the lining of which protects the tin from being attacked by the acid in the fruit.

Cans. — If tin cans are used in canning a sealing machine or soldering is essential. At present the hand can sealer is being used in American homes as well as in canning on a small commercial scale. This simple machine is very easy to operate and no solder is required.

Sterilizer — Any one of several vessels may be used as a sterilizer (the vessel that holds the filled jars or cans during the sterilization period); namely a steam-pressure cooker, a steam sterilizer, a simple boiler, or an air oven (gas or electric).

The steam-pressure cooker is provided with a pressure gauge and safety valve and carries from 5 to 30 pounds of steam pressure. There are several types in the market; some are made of aluminum, some of iron. The steam-pressure cooker is very handy to have for home or community canning, for sterilization in this cooker is very rapid.

The steam sterilizer consists of an oven provided with steam, or a doubled-lined oven. The space between the walls is heated by the steam which is generated when the water in the oven boils.

A simple boiler may be a home-made utensil or a boiler with a tight-fitting cover and large and deep enough to hold 2.5 centimeters of water above the jars or cans. A wash boiler is popularly used. The boiler should be provided with a wire or wooden rack to hold the jars, so they will not come in contact with the bottom of the boiler, as too high heat will cause breakage. The rack should be held far enough from the bottom of the boiler to permit circulation of water underneath the jars. The rack should be constructed in such a way that the jars will be held in place during the sterilization period, to prevent them from bumping against each other, and should be provided with handles so as to avoid the use of bottle lifters.

Bottle lifters are long iron tongs especially devised for lifting bottles from boilers.

An electric oven is an air oven heated by electricity. This is hardly ever used, for it is very expensive. The air oven heated by gas is also seldom used, for in canning dry heat is not satisfactory as is moist heat.

Other utensils — The paring knives should be sharp. About three enamel-lined or porcelain wash basins should be provided. Silver knives, silver spoons, and long-handled spoons are also necessary. Plenty of clean towels are indispensable. A large, clean table is very essential. Funnels, both narrow- and wide-mouthed, are necessary — the narrow-mouthed for filtering syrup and the other for transferring the cooked fruits from the open kettle to the jars when the hot-packed method is used.

Plenty of sugar, syrup, salt, or brine should be ready for use.

FRUITS

Handle fruits with care to prevent bruising. The bruised part discolors and softens and must be removed when the fruit is peeled. Unless the fruit, like mango, requires ripening in a room after picking, it should be canned immediately after picking. This insures a better product because generally, fruits rapidly deteriorate on standing at ordinary room temperature.

Fruit for canning should be fully mature and just eating ripe. Overripe fruits soften when heated, lose their shape, and ruin the appearance of the product. Under-ripe fruits shrivel and toughen when heated with syrup and also makes an unsightly pack. Besides, underripe fruits have not developed their maximum flavor and are usually sour.

GRADING

Much importance is given to grading by commercial packers. Highly specialized machines are used for different fruits. If one opens different cans of pineapple for instance, labelled "fancy," "choice," "standard," "second grade" and "pie grade," she will be convinced that there is much difference between the five grades and one who is acquainted with the grading and canning methods employed by the commercial canners will likely patronize the "standard" grade unless the buyer has a special use for the fancy and the choice for which she pays more than for the standard. For the information of the buying public that patronize the U.S. canned goods which we yearly import in very large quantities, the following specifications for different grades adopted by the California Canners' League and which are also recognized by other canners in California are quoted below:

For home canning, it is suggested to sort and grade the fruits into 3 grades:

1. Fancy, which consists of the largest fruit, uniform in size and in degree of ripeness, free from blemishes, and symmetrical.
2. Standard, which consists of the next best to fancy.
3. Pie, which are neither fancy nor standard. Since pie is not very commonly made here, the pie grade fruits may be used for jams, jellies, marmalades, butters, preserves, juices, and syrups.

The importance of grading fruits in canning cannot be over-emphasized. It insures a uniform pack and flavor, and commands a better price. Besides, as already stated, if fruits are not graded, very ripe fruits packed with under ripe fruits become very much softer than the under ripe ones and small sized fruits packed with large ones get mashed with the large ones which may not be well cooked during the process of sterilization. Even for home canning, sorting and grading should be observed for this is a means of removing bruished and overripe fruits, generally loaded with all kinds of micro-organisms which need to be killed in the sterilization process and which, in addition to their bad appearance, lengthen the sterilization period.

BLANCHING

Some fruits and vegetables are easily peeled after blanching. To blanch the fruit or vegetable, place in boiling water for a few minutes, then immerse in cold water. This process loosens the skin of some fruits and makes it easy to remove. The period required for blanching depends on the kind of fruits. Tomatoes and beets are easily peeled after blanching.

Blanching has different functions for different fruits and vegetables. For some, it causes the food to shrink, so that a larger quantity may be packed in the container. This is true in the case of leafy vegetables like alogbati, pechay, and cabbage. In some cases, blanching removes the bitter taste, as in asparagus. It sometimes coagulates the substance that oozes out when peeled with a knife (as in the case of santol and rimas) a milky substance which turns the color of the peeled fruit brown. Blanching prevents this discoloration. In some cases, blanching swells the product as in the case of beans. In all cases blanching partially removes the microorganisms present in the fruit.

STEMMING AND WASHING

There are some fruits that are ready to pack after stemming and washing. This is true of small fruits like strawberries, siniguelas, galo, and others.

Washing fruits and vegetables in large canneries is accomplished by the use of specially devised machines made to suit the different fruits and vegetables. Washing fruits for home canning is satisfactorily accomplished by placing the fruits in a basket or a colander, dipping the basket several times in a bucket containing soap water and rinsing it in bucket containing clean water. Or, by placing the basket under a faucet and letting enough water pass through the basket containing the fruit. Since all large fruits like condol and nangka have to be peeled, often times there is no need to wash the fruits unless they are full of dust or dirt. A hand brush is recommended in cases when the fruit is dirty and needs a thorough washing.

PEELING

Peeling is usually accomplished by the use of a knife. Stainless steel knife must be used to prevent discoloration. It must be sharp when used. Peeling may also be accomplished after blanching the fruit. In blanching, the skin loosens and may easily be peeled with the finger. Some fruits that are thin skinned may be peeled with lye. Guavas and santol are very satisfactorily peeled by the use of hot lye solution. Peaches, apricots, quinces are peeled in large canneries in the U.S. with lye. Vegetables like carrots and sweet potatoes are also peeled by the use of boiling lye solution from 1% to 3% strength, and from a few seconds to about 2 minutes, depending on the kind of fruit or vegetable peeled.

Peeling by the lye method is a time saver and is economical because it removes the peeling only and not a part of the pulp as in the case of knife peeling. Besides, the fruits peeled by this method is rendered very smooth and attractive. In peeling fruits with lye, the fruit should be dropped in a very hot or boiling solution of lye and immediately removed when the peel darkens. Then the fruit is placed immediately in a pan of water and skinned by hand. It is more desirable to place the fruit under a spray. One must be sure that no trace of lye remains in the fruit for it imparts a very peculiar taste and ruins the desirable flavor. In the absence of lye, santol may be peeled with a knife. The guarded knife is suggested for it peels more economically and smoothly than an ordinary knife.

Some canners use a mixture of sodium hydroxide and sodium carbonate solution. This is a weaker peeling solution than the pure lye solution.

Cutting the fruit is accomplished by the use of a sharp, long butcher knife. Large fruits like rimas, condol, green papaya and guayabano may be cut with an ordinary butcher iron knife. Mango should be cut with a stainless steel knife. Nanka should be cut with a knife previously rubbed with a cloth dipped in oil (any oil that is odorless and tasteless will do). Cutting may also be accomplished by using some specially devised cutters which give an artistic shape to the pieces of fruit.

In cutting the fruit, the size of the container should always be considered. It is not wise to cut the fruit in pieces too large to pack in the jar. Likewise, precautions should be taken when packing in large containers like the half gallon and gallon sized jars which need a much longer sterilization periods, so the pieces should not so small so that they lose their shape after sterilization.

SYRUP

Syrup is a solution of sugar in water. Cane and beet sugars are the commonest sugars used in canning fruits either commercially or in the homes. Syrup added to fruit packed in cans or jars perform several functions namely; it improves the flavor of the fruit particularly acid ones; conserves their natural flavor, aids in fixing the color of fruits that have a tendency to be bleached by tin if packed in cans, toughens the tissues of the fruit so that it stands heating better, fills the interstices packing the jars or can more completely, masks in some respects the metallic taste produced from the action of acid contained in the fruit on the iron of the can, serves as a cushion for the pieces of the fruit, thus preventing the pieces to jam during transportation, helps to exclude the air, and aids in the transfer of heat during sterilization.

Syrups — Fruits are usually canned with syrup. The strength of the syrup used in fruit canning largely depends on the acidity of the fruit, on the quality of fruit used, and on the quality of canned product desired. Sweet fruits require a thicker syrup than standard grade fruit for standard pack. Syrup may be made by either mixing the sugar and water, bringing the mixture to a boil and filtering to remove whatever foreign material may be present, or by adding sugar to hot or boiling water, stirring until the sugar is dissolved and filtering through a piece of clean muslin or cheese cloth. In commercial canning, the usual way is to make a concentrated syrup with water and sugar in large porcelain or glass lined jacketed kettles or tanks drawing a certain amount of this syrup to another tank were enough water is added to produce the desired density. For home canning, thin, medium, thick and very thick syrups are used. These syrups will hereinafter be referred to by number, namely, 1, 2, 3, and 4. The quantities of sugar and water to make the syrup are as follows:

No. 1 thin — 1 cup sugar plus 3 to 4 cups water
No. 2 medium — 1 cup sugar plus 2 cups water
No. 3 thick — 1 cup sugar plus 1 cup water.
No. 4 very thick — 2 cups sugar plus 1 cup water

The water used in making syrups should be clean, and free from microorganisms that may cause spoilage and from minerals that may react with the fruit thus producing discoloration, precipitation or clouding. The sugar used must also be of a good quality; otherwise, the syrup will be cloudy and may impart a taste of molasses to the products. Brown looking pack, and the molasses taste will be conspicuously noticeable.

Soft water is preferred to hard water which generally contains carbonates, iron, or sulphur compounds which may cause clouding, discoloration, and precipitation.

Sugar for syrup making should be sifted and transferred to the measuring cup lightly. Packing should be avoided. A spatula or any similar utensil with a straight edge may be used in ~~labeling~~ leveling the cup.

Brine. — Brine is made by dissolving salt in water, and then boiling and filtering the solution. From 2 to 5 per cent brine is used in canning vegetables. Brine is also used in preparing some fruits for canning which turn brown immediately after peeling.

Steps in Canning

1. Prepare the fruit; that is, sort, wash, blanch, peel, and slice (if necessary).
2. Pack in jars or cans.
3. Add hot syrup.
4. Put tops in place and half seal.
5. Sterilize; see Table 1 for sterilization period and calculate from the time the water begins to boil.
6. Remove from sterilizer.
7. Seal tightly
8. Invert jars and cool.
9. Clean outside of jars and affix label.
10. Store in a cool, dark, dry place.

TABLE 1 — Time table for sterilizing quart jars.
(For pint jars or for 1 to 1.5 pound cans, deduct 5 minutes)

Balimbing, whole	30	25	12
Balimbing, halved	25	20	10
Breadfruit, or rimas	35	30	15
Chico, whole	30	25	12
Chico, halved	25	20	10
Galo	35	30	15
Guava, or bayabas	30	25	12
Guayabano	35	30	15
Hevi	30	25	12
Huani, sliced	25	20	10
Kaki (Pagatpat)	30	25	12
Karanda or carissa	25	20	10
Katuri	30	25	12
Ketembilla	25	20	10
Lanzon	25	20	10
Mabolo	25	20	10
Makopa	35	30	15

Mango, whole	35	30	15
Mango sliced	25	20	10
Mangosteen	25	20	10
Nanka (Jackfruit)	30	25	12
Paniala	30	25	12
Papaya	25	20	10
Pina, or pineapple	40	35	17
Santol, whole	35	30	15
Santol, quartered	30	25	12
Siniguelas	35	30	15
Sinkamas	30	25	12

If the fruits are too large to be put in jars or cans, slice or cut them into smaller pieces. Then pack carefully up to the neck of the jar or, if cans are used, to about 6 centimeters of the top. If jars are used, adjust the rubber rings, then pour hot syrup until all the interstices are filled and add more syrup until the jar is full. The jars are then half sealed; that is, in case of screw tops, the tops are screwed loosely, and in case of doubled-seal jars, they are half sealed, sterilized in the sterilizer, and then taken out. The jars are then tightly sealed and inverted to insure sterilization of the tops, cooled, cleaned, and labeled with the name of the fruit. The jars are stored in a cool, dry, dark place. Light sometimes decolorizes the fruits. If the jars are to be sterilized in a wash boiler they should be placed on the rack and enough water be put in the boiler to cover the jars. 2.5 centimeters from the top of the jars. The boiler is then tightly covered or, better still, a piece of cloth is spread on top of the boiler before the cover is adjusted, so as to prevent the escape of steam. If cans are used the can is filled with the fruit and enough boiling syrup added to fill it full; the can is then sealed hermetically with a can sealer, and sterilized. When cans are used the sterilizer commonly used is the pressure cooker, although boiling water or a steam oven is very satisfactory when the products to be canned are fruits.

Detailed Instructions for Canning Special Fruits

Mango — Use the ripe fruit only, not overripe; remove the seed with a sharp knife; remove the pulp from the skin with a silver spoon, trying as much as possible to make the pieces uniform in size; pack in jars or cans; pour hot syrup No. 2 to fill the container; run a knife under the edge of the container to remove air bubbles; jars should be half sealed, and cans completely; sterilize. Remove jars from sterilizer and immediately seal tightly; invert jars and cool. Do not put jars in a draft, for this will break them. When cool, wipe the outside of jar with a wet cloth, then with a dry one; label, and store in a dry, cool, dark place.

If mangoes are to be canned whole, peel and pack in jars; pour in hot syrup No. 2 and sterilize (consult Table 1 for sterilization). Whole mangoes require a longer time for sterilization than sliced. Follow directions given above.

If the mangoes are very sweet use syrup made in the proportion of 1 cup sugar to 3 cups water.

Lanzon — Local names, bulahan, buan, kalibongan, lansones. Peel the fruits with the fingers and separate the segments; drop in weak brine (about 5 per cent) to prevent them from turning brown; remove the seed from each segment and wash thoroughly with cold water until all salt is removed. Pack in jars or cans and add syrup No. 2; sterilize (see Table 1). Follow the rest of the instructions given under Mango.

Canned lanzones turn light brown on standing. This discoloration can be partly overcome by using colored jars or by storing the jars in a dark place.

Piña, or pineapple. Blanch 4 minutes; remove; peel about 3 centimeters thick; remove eyes with the point of a sharp knife; cut into squares or into any form desired, taking care that the slices are uniform; wash thoroughly in cold water. Pack in jars or cans and add syrup No. 3, sterilize (see Table 1). For further directions, see Mango.

Santol. — Boil 3 minutes, peel as thin as possible with a sharp knife. If the santols are to be canned whole, prick with a pin and soak in rice washing overnight; then wash with water to remove all the rice washing. Boil in plenty of water for about 2 minutes. Drain and squeeze each fruit to remove most of the water. Pack in colored jars, add hot syrup No. 3, half seal and sterilize. For the rest of directions, see Mango .

If the santol fruits are to be canned without the seeds, blanch 3 minutes; peel; cut into quarters; remove seeds; soak in rice washing overnight; wash off rice washing with water; boil 1 minute in water; drain and pack in colored jars; fill jars with hot syrup No. 3 and sterilize. Remove the jars from the sterilizer and seal completely.

Colored jars are preferred over white ones because the santol becomes brown on standing if kept in white jars.

Guava. — Blanch the ripe fruit for 2 minutes; peel thin; if to be canned whole, prick with pin; drop the peeled, pricked fruit into a pan of cold water. Drain and pack in jars and add hot syrup No. 3; sterilize (see Table 1). For further directions, see Mango.

If the guava is to be canned sliced, blanch for 2 minutes; peel; cut into halves; remove seeds; pack in jars and add syrup No. 3; sterilize (see Table 2). For further directions, see Mango.

Papaya. — Local names, kapaya, papias, tapayas.

Peel the ripe papaya and wash in cold water; cut open and remove the seeds with a spoon; cut into small pieces as desired; pack in jars and add syrup No. 2 sterilize (See Table 1). For further directions, see Mango.

Chico. — Sort the fruits and can only the ripe ones. Blanch 2 minutes; peel and cut into halves; remove seeds; boil in water for 4 minutes; drain and wash with cold water. Pack in jars and add syrup No. 2; sterilize (See Table 1). For further directions, see Mango.

If the chicos are to be canned whole, blanch; peel; boil for 5 minutes; wash in water and drain. Pack in jars and and syrup No. 2; sterilize (See Table 1).

Nanka, or jackfruit. — Open the fruit and separate the segments; remove the seed from each segment. Pack the segments in jars and add syrup No. 2; sterilize (See Table 1) For further directions, see Mango.

Mangosteen. — Sort the fruits and use only those that are soft enough to be opened by hand; open the fruit and separate the snow white pulp. Pack in jars and add syrup No. 3; sterilize (See Table 1). For further directions, see Mango.

Guayabano. — Pare the mature but not to ripe guayabano, cut into squares, and remove the seeds. Pack in jars and add syrup No. 3; sterilize (See Table 1). For further directions, see Mango.

Breadfruit. — Blanch 5 minutes; peel the ripe breadfruit with a knife and cut it into small pieces, as desired; wash; drain; boil slowly with syrup No. 3 in an open kettle for about 15 minutes; drain the syrup into another vessel and pack the boiled pieces in the jars. Add syrup No. 3 and sterilize (see Table 1). For further directions, see Mango.

Mabolo. — Sort and blanch 2 minutes; peel; cut into quarters; remove seeds. Pack in jars and add syrup No. 3; sterilize (see Table 1). Continue as with Mango.

Cashew (*Kasoy*). — Use fruit only. Take out the beanshaped seed, using the fingers. Wash the fruit thoroughly; blanch 3 minutes; pack in jars; add hot syrup No. 3 and sterilize (see Table 1). For further directions, see Mango.

Siniguelas. — Select the mature but not ripe fruits; remove the stems; wash; blanch 2 minutes; pack in jars and add hot syrup No. 3; sterilize (see Table 1). For further directions, see Mango.

Makopa. — Sort the fruits and use the ripe ones only. Wash thoroughly with water and blanch 2 minutes. Pack in jars and add hot syrup No. 3; sterilize (see Table 1). For further directions, see Mango.

Kamanchile. — Take the fruit from the pod and remove the seeds. Pack in jars; add syrup No. 3 and sterilize (see Table 1). For further directions see Mango.

Galo. — Boil for about 3 minutes. Drain; pack in jars; and syrup No. 3 and sterilize (see Table 1). For further directions, see Mango.

Pagatpat. — Sort the fruits blanch 2 minutes and peel. Cut into halves if desired and pack in jars. Add syrup No. 2 and sterilize (see Table 2). For the rest of directions, see Mango.

Balimbing. — Prick with a pin and boil for a few minutes with plenty of water in a copper kettle. Drain the water and next boil the fruit with syrup No. 2 in a copper kettle until the fruit becomes green again. Then pack the fruit in jars and add syrup No. 3. Sterilize (See Table 1). For further directions, see Mango.

Huani. — Since huani is very similar to mango, follow the directions under Mango.

Tubo. Coconut embryo. — Sort according to size and use in jars and add syrup No. 3. Sterilize (see Table 1). For further directions, see Mango.

Hevi.[2] — Use the ripe fruits only. Peel with a knife; cut into desired slices; pack in jars and add syrup No. 3. Sterilize (see Table 1). For further directions, see Mango.

Ketembilla.[2] — Sort and use ripe fruits only. Blanch one minute; peel and pack in jars. Add syrup No. 4 and sterilize (see Table 1). For further directions, see Mango

Carrisa.[2] — Use ripe fruits. Wash and pack in jars. Add syrup No. 3 and sterilize (see Table 1). For further directions, see Mango.

Katuri.[2] — Use ripe fruits only. Blanch 2 minutes; peel and cut into quarters. Boil in plenty of water for about 5 minutes; then boil in syrup No. 3 for 10 minutes. Allow it to stand overnight in the same syrup. Drain and pack in jars. Add syrup No. 4 and sterilize (see Table 1). For further directions, see Mango.

Malpi.[2] — Blanch the ripe fruit; pack in jars and add syrup No. 3. Sterilize (see Table 1). For further directions, see Mango.

Saba banana. — Use the ripe fruits. Boil for about 10 minutes. Peel and pack in jars; add syrup No. 3 and sterilize (see Table 1). For further directions, see Mango.

Sweet Potato. — Scrub with a brush and boil in a small amount of water until done. Peel and cut into pieces of uniform size. Pack in jars and add syrup No. 3. Sterilize (see Table 1). For further directions, see Mango.

Gabe. — Follow directions under Sweet Potato.

Ube. — Follow directions under Sweet Potato.

General Instructions for Making Jams

Peel the ripe fruit and mash until it is reduced to very fine pieces or pulp; add from 500 to 100 per cent of its weight of sugar and cook until thick. Transfer to sterilized jars while boiling hot and seal tightly.

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[2] These are foreign fruits now growing at Lanao Experimental Station of the Bureau of Agriculture.

Mango jam. — Peel the ripe fruit remove the seed; mash and to ten cups of the pulp, add 6 cups of sugar. Cook until thick and while boiling hot transfer to well sterilized jars and seal jars tightly.

Papaya jam. — Peel the ripe fruit and wash; open and remove all seeds; mash. To 10 cups of the pulp add 1½ cups of sugar. Boil until thick. A few slices of lemon added while cooking will improve the flavor. Transfer while hot to well-sterilized jars and seal hermetically.

Pineapple jam. — Peel and remove eyes. Cut into pieces and boil until soft with a very small amount of water. Pass through a food chopper and to 10 cups of the pulp add 7½ cups of sugar. Cook until thick and while hot transfer to well-sterilized jars. Seal tightly.

Lanzon jam. — Peel and separate the segments. Remove the seeds and cut into fine pieces. To 1 cup of the pulp add ¾ cup of sugar. Cook until thick. Transfer while hot to well-sterilized jars and seal hermetically.

Guanabano jam. — Peel the ripe fruit and remove the seeds. Pass through a meat grinder. To 1 part of the pulp add 1 part of sugar and boil until thick. Pack while hot in well-sterilized jars and seal tightly.

Jackfruit jam. — Open the fruit and separate the segments; through of food chopper. To one cup of the pulp add 3/4 cup of sugar and boil until thick. Pack in well-sterilized jars and seal tightly.

Papaya-Orange jam. — Peel the papaya; remove the seeds and pass through a food chopper. Boil the pulp 5 minutes. To each cup of boiled papaya add 1 cup of mandarin[3] juice, 1 teaspoon of grated peel, and 3/4 cup of sugar. Boil until thick and clear. Pack while hot in well-sterilized jars and seal tightly.

Papaya-Guanabano jam. — Prepare the papaya pulp as for papaya jam prepare the guanabano pulp as for guanabano jam. To each cup of papaya pulp add 1 cup of guanabano pulp and 1½ cups of sugar. Boil until thick; pack while hot in well-sterilized jars and seal tightly.

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[3] Naranjita.

Papaya-Pineapple jam. — Reduce the ripe papaya to a fine pulp and to each cup add one cup of pineapple that has been cut into very fine pieces. Add 1½ cups of sugar and boil until thick. Pack in well-sterilized jars and seal tightly.

Tamarind jam. — Select the ripe tamarind. Peel and soak overnight in plenty of water. Drain and put the soaked tamarind in a piece of coarse sinamay and squeeze until all the pulp has come out. To each cup of tamarind add 1 cup of sugar and boil until thick. Pack in well-sterilized jars and seal tightly.

Papaya-Tamarind jam.—To each cup of payaya pulp add ½ cup of tamarind pulp and 1-1/2 cups of sugar. Boil until thick; pack in well-sterilized jars and seal tightly.

Mango-Orange jam. — To 1 cup of mango pulp add ½ cup of orange juice and 1 cup of sugar and boil until thick. Pack in well-sterilized jars and seal tightly.

Tubo-Mango jam. — Pass the tubo through a food chopper and boil for 5 minutes. To each cup of tubo add 1/4 cup of mango 1 cup of sugar and cook until thick. Pack in well-sterilized jars and seal tightly.

Tubo-Guanabano jam. — Pass the tubo through a food chopper and boil for 5 minutes. To each cupful add 1/2 cup of guanabano pulp and 1¼ cups of sugar and boil until thick. Pack while hot in well-sterilized jars and seal tightly.

Tubo-Jackfruit jam. — Follow directions above, using ½ cup of jackfruit instead of guanabano, and add 1 cup of sugar instead of 1-1/4.

Tubo-Orange jam. — Pass the tubo through a food chopper and prepare the orange as follows: Peel orange and separate the segments. Remove the seeds and white covering of each segment. Use the remaining pulp. To each cup of tubo and 1 cup of orange pulp and 1-1/2 cups of sugar. Boil until thick; pack while hot in well-sterilized jars and seal tightly.

Chico jam. — Peel the fruit and cut into quarters. Remove the seeds and mash the fruit until it is reduced to fine pieces. To 1 cup of chico pulp add 3/4 cups of sugar and boil until thick. Pack while hot in well-sterilized jars and seal tightly. Small amounts of nutmeg, allspice, and cinnamon will improve the flavor.

Guava jam.—Use the ripe fruits only. Peel and mash the fruit. To 1 cup of the pulp add 1 cup of sugar. Boil until thick; pack in well-sterilized jars and seal tightly.

Rimas jam. — Use the ripe fruit. Wash and boil the whole fruit until soft. Peel and mash. To each cup of the pulp add 3/4 cup of sugar and boil until thick. Pack in well-sterilized jars and seal tightly.

Rimas-Orange jam. — Wash the ripe fruit and boil until thick; mash and to 1 cupful add 1/2 cup orange juice, 1 teaspoon grated orange rind, and 1-1/4 cups sugar. Boil until thick; pack in well-sterilized jars and seal tightly.

Saba jam. — Boil the ripe banana until thick. Pack in well-sterilized jars and seal tightly.

Guanabano-Orange jam. — Peel the ripe guanabano and remove the seeds. Pass through a food chopper. Peel the orange and separate into segments. Remove seeds and white covering of each segment and use the pulp only. To each cup of guanabano pulp add 1 cup of orange pulp, 1 tablespoon of grated orange peel, and 2 cups of sugar. Boil until thick; pack in well-sterilized jars and seal tightly.

Jackfruit-Orange jam. — Open the fruit and separate the segments. Remove seed from each segment and pass the segments through a food chopper. To each cup of the pulp add 1 cup of orange, 1 tablespoon of grated orange peel and 1-1/3 cups of sugar. Boil until thick; pack in well-sterilized jars and seal tightly.

General Instructions for Making Jellies

Jelly is a fruit product prepared by expressing the juice from the boiled fruit, boiling with sugar, and cooking to such consistency that gelatinization takes place on cooling.

A good jelly must gelatinize on cooling and retain the shape of the container when removed. It must be soft but must not flow, and soft enough to quiver on shaking. It must be clear and transparent and should retain the flavor of the fruit.

Jelly can be made only from fruits rich in pectin and acid, although it is also made from other fruits containing less pectin or acid, by adding commercial pectin, or pectin prepared at home, or the juice of other fruits rich in acid and pectin such as apple, santol, paniala, or bignay. The presence of acid is just as essential as pectin in jelly making, as it has been found that sweet fruits rich in pectin will not "jell" without the addition of other juices that are rich in acid. Sweet guava, peach, and quince are examples.

Pectin is a substance belonging to the carbohydrate group. It is usually called vegetable jelly. It is found in many fruits, especially in mature or just ripe fruits. It is extracted as variously colored translucent substance which dissolve in hot water and become viscous on cooling.

Some of the American fruits that are rich in pectin are sour apples, crab apples, under-ripe grapes, quinces, cranberries, raspberries, blackberries, blueberries, wild cherries, and green gooseberries.

The Philippine fruits that are rich in pectin so far found are guava, santol, bignay, duhat, green tamarind, ketembilla, lipoti, carissa, and paniala.

If commercial pectin is unobtainable pectin can be prepared at home by the following method:[4]

Grate all the yellow rind off the orange fruit; cut off the remaining white peeling, and run it through the meat grinder. Weigh it, and to each 1.1 kilograms add 3 cups of cold water and 3 tablespoonfuls of lemon juice. Mix thoroughly and set aside for 4 hours. Then boil it for 10 minutes. When it is cooled, add another 3 cups of cold water, bring it again to the boiling point, and then let it stand overnight. The next morning, boil a third time, for 5 minutes. Cool, and strain through a jelly bag. Use one cupful of this orange pectin to each cupful of the fruit juice, and add only 1 cup of sugar for this amount.

Preparation of powdered pectin.[5] — Make a jelly from apples or equal weights of lemons and oranges and concentrate. Cool, and add the concentrated juice slowly while stirring to twice its volume of 95 per cent ethyl (grain) alcohol. Separate the alcohol from the pectin by draining through a muslim cloth and pressing. Dry at room temperature on a screen. Dissolve the dried pectin in a small amount (about 150 cubic centimeters) of water and strain through a cloth. Add the pectin solution to twice its volume of ethyl alcohol and separate the precipitate by straining through muslin. Dry at a temperature of 120° to 130° F. Grind in a mortar to a powder. Store in a corked bottle.

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[4] From Successful Home Canning and Jelly Making Extension Service of the College of Agriculture, University of Wisconsin, Madison, p. 22.

Apple Pectin.

- 1 pound apples.
- Juice of 1 lemon.
- 4 pints of water.

Boil for one-half to three-fourths of an hour, place the juice in a heavy flannel bag, and allow the juice to drain without pressure. After bottling and sterilizing for 15 minutes in water it can be kept until needed for jelly making.

Preparations for Jelly Making — It is the safest rule to test the fruit for pectin content before proceeding to jelly making because the amount of sugar that is to be added has much to do with the pectin content. More sugar may be allowed to fruit juices rich in pectin than to those not so rich.

How to Test for Pectin Content — From the juice of the fruit that has previously been boiled and filtered, draw off about 10 cubic centimeters, or about one teaspoonful, and transfer to a test tube (or a glass, if a test tube is not available) and to it add an equal amount of 95 per cent alcohol. A precipitate will appear, the amount of which indicates the pectin content of the fruit juice. A small amount of precipitate indicates that the juice is poor in pectin. The presence of a few large pieces of gelatinous precipitate indicates that the juice is rich in pectin. The absence of precipitate indicates the absence of pectin.

The simplest test for acidity is to taste the juice; a surer method, however, is to titrate an aliquot portion of the juice with a standard solution of alkali.

In addition to the utensils mentioned for canning fruits the following are necessary: jelly glasses, paraffin, and muslin bags.

Fresh fruits should be used and they should have been picked not longer than 24 hours before cooking. Just ripe or slightly underripe fruits are best, for at this stage they are rich in acid and pectin.

Steps in Jelly Making

1. Extract the pectin. Since pectin is soluble in hot water, cut the fruit into small pieces, add a small amount of water, and boil until soft.

2. Express the juice. If preparing a large quantity, express the boiled fruit and place the juice in a pan. Let it stand overnight. Filter the next morning. If making only a small amount of jelly put the boiled fruit in the muslin bag and hang it where it will drip overnight.

3. Test the juice for pectin and acid, using the test already described.

4. Add to the clear juice clean sugar, previously warmed in an oven, in the following proportion:

(a) If the juice is rich in pectin add 1 cupful to 1 cup of sugar.

(b) If the juice is moderately rich in pectin add 1 cupful to 3/4 cup of sugar.

(c) If the juice is poor in pectin add 1 cupful to a half-cup of sugar.

(d) If the juice is still poorer in pectin, boil and concentrate until the test for pectin content is satisfactorily positive.

5. Boil the mixed sugar and juice, skimming from time to time, until the "jelling" point is reached. If the juice is overboiled the pectin is broken down to pectic and other acids and therefore loses its power of gelatinizing.

(a) Dip a spoon into the pan containing the juice and sugar. Hold it up and let the juice drip. When the juice drops in a mass from the side of the spoon, or if it drops in flakes, the "jelling" point is reached.

(b) Drop the juice in a saucer containing cold water; when the drops do not change and melt, the "jelling" point is reached.

(c) Dip a thermometer in the boiling juice. When the jelly boils at 212° F., the "jelling point is reached.

6. Filter the boiling juice through a few thicknesses of gauze.

7. Fill the jelly glasses or jars with the filtered juice and let them stand to cool.

8. Melt paraffin in a pan. Run the point of a knife around the inner edge of the glass, loosening the jelly about 6 millimeters from the top; then pour over it hot paraffin to cover.

9. Place the tin cover over the jelly glass and label the glass.

10. Store in a cool, dry, and dark place. A second and a third extraction of juice may be made by reboiling the pulp with a small quantity of water and concentrating the juice before sugar is added.

Santol jelly. — Wash and blanch recently gathered, just ripe, or underripe santol; cut into small pieces; put in a pan and add just enough water to cover the produce; boil until soft; squeeze the juice out and allow it to settle; filter juice through a muslin bag; test for pectin content; measure the juice and add recently heated sugar in the proportion of 1 to 1; boil, skim, and determine "jeeling" point; when this point is reached, transfer to jelly glasses and let cool. Pour melted paraffin over it and place the tin cover; label and store.

Guava jelly — Wash and blanch mature but not ripe guavas; cut into small pieces and boil in a small quantity of water until soft; transfer to a muslin bag and let it drip; test for pectin and add the right amount of sugar (1 to 1); boil, skim, and determine "jeeling" point; filter, and fill jelly glasses. When cool, pour melted paraffin and place the tin cover; label and store.

Ripe guavas are usually rich in pectin but low in acid. If low in acid, add some juice of an acid fruit or some citric or tartaric acid (3 per cent).

Bignay jelly. — Stem and wash just ripe bignay berries and follow general directions. The proportion of sugar to juice is 1 to 1.

Paniala jelly. — Stem and wash; blanch 1 minute, cut into small pieces and follow general directions. The proportion of sugar to juice is 1 to 1.

Guava-Santol jelly. — Follow the general directions. Use equal parts of sugar and juice.

Tamarind jelly. — Peel the ripe tamarind and soak in plenty of cold water overnight; drain and pulp; remove the seeds; put the pulp in a pan with a small quantity of water; add some apples, cut into small pieces (three apples to 1 kilogram of pulp); boil for about 30 minutes; strain and to the strained juice add an equal amount of sugar; boil and follow general directions.

Mabolo jelly. — Boil together 4 parts of mabolo and 1 part of green tamarind in a very small amount of water. Express the juice and measure. To each cup of the juice add 3/4 cup of sugar and follow general directions.

Papaya jelly. — Follow instructions under Mabolo jelly, using ripe papaya instead of mabolo.

Chico jelly. — Follow instructions under Mabolo jelly; using ripe chicos instead of mabolo.

Duhat jelly. — Boil the ripe fruit with a small amount of water and express the juice. To each cup of the juice add 1 tablespoon of lemon juice. To each cup of the mixed juice add 1 cup of sugar and boil until the jelling point is reached. Follow general directions for jelly making.

Makopa jelly. — Boil the washed makopa with a small amount of water. Transfer to cheesecloth and squeeze out the juice. To each cup of juice add 2 tablespoons of lemon juice and 1 cup sugar. Boil the mixture until the jelling point is reached. Follow general directions.

General Instructions for Making Marmalades

Marmalade is jelly in which slices or fruit or peelings are suspended. The general directions for jelly making already given will also apply in making marmalade, except that slices or pulp, and sometimes the peelings of the fruit, are included. Seeds should be discarded.

Orange marmalade (slightly bitter). — Peel the oranges and slice the peelings into very thin pieces of about 2.5 to 3.75 centimeters in length; boil in a kettle in plenty of water until tender; drain off the water; pulp the peeled orange and pass through a sieve; add the peelings and 1 of pulp and peelings; boil to the right consistency, as in jelly.

Orange marmalade (sweet). — Follow the preceding instructions, but soak the sliced peelings in strong brine solution (about 20 to 30 per cent) overnight and wash thorough next morning until the salt has been washed off. Soaking the peel in brine removes the bitter taste.

To be sure that all the bitterness will be eliminated, take a very sharp knife and peel off as thin as possible the outer part of the rind of the orange. Then separate the peel from the pulp and cut into thin slices, about 1¼ inches long. Boil with water for about 3 minutes. Drain and boil again water; drain and squeeze out the water.

Mandarin marmalade. — Cut as thin as possible the outer part of the rind. Cut the fruit into quarters. Peel off each quarter and cut the peelings into very thin slices, about 1 to 1¼ inches long. Boil 3 minutes in water; change the water and drain and boil again, and squeeze out the water. Separate the segments and take out the seeds and the white covering from each segment. Use the pulp only. To one cup of the pulp and ½ cup of sugar and boil until somewhat thick. Then add the rind and boil again until thick. Pack in well-sterilized jars and seal tightly.

Mango marmalade. — Two parts mango pulp + 1 part apple pulp + 3 parts sugar.

Nanka marmalade. — Two parts nanka pulp + 1 part apple pulp + 3 parts sugar.

Bignay marmalade. — Three parts bignay pulp + 3 parts sugar.

Santol marmalade. — Three parts sliced santol + 3 parts sugar.

Guava marmalade. — Two parts guava pulp + 1 part bignay pulp + 3 parts sugar.

Tomato marmalade. — Blanch ripe tomatoes and peel; remove the seeds, and to the pulp add some lemon pulp; make the combined pulp into marmalade, using equal parts of pulp and sugar.

General Instructions for Making Fruit Butters

Fruit butters are fruit products made by boiling the fruit pulp, straining[6] it and boiling down, with or without sugar, to a thick and homogeneous consistency. Sometimes juice instead of sugar is added. Some use spices as flavoring.

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[6] The straining can be done through a piece of sinamay, coarse cloth made from abaca fiber, thin cheesecloth, or a fine sieve.

Use ripe fruits only. Blanch, peel, and cut into small pieces; boil with a small quantity of water until soft; mash and pass through a screen or sieve; add 0.5 to 0.75 kilogram of sugar to 1 of pulp. If juice is to be used instead of sugar add 1.4 liters of juice to 0.5 kilogram of pulp.

Add spices, such as cinnamon, cloves, allspice, etc., to the pulp, if desired; one-third of a teaspoon of spice to 0.5 kilogram of pulp is sufficient.

Boil the pulp and sugar or juice down to a very thick consistency. While boiling hot, transfer to sterile jars or glasses and seal immediately. If glasses are used, paraffin may be used, as in jelly.

Fruit butter differs from jam in that it is finer and is concentrated to a thicker consistency.

Guava butter. — Blanch and cut ripe guavas into small pieces; boil until soft; pass through a sieve or sinamay; add 0.75 kilogram of sugar to 1 of strained pulp and boil down to a thick consistency.

Mango butter. — Peel the ripe mango and remove the seed. Reduce the meat to fine pieces and pass through a piece of sinamay. To each cup of strained pulp add ½ cup of sugar and boil down until thick. Pack while hot in well-sterilized jars and seal tightly.

Nanka butter. — Proceed as with mango.

Duhat butter. — Same as mango, but use 0.75 kilogram of sugar to 1 of pulp.

Chico butter.—Same as mango, but use allspice, nutmeg, and cinnamon to flavor.

Papaya-Tamarind butter. — Pare the ripe papaya; remove all seeds and mash. Pass the pulp through a piece of sinamay. Soak the ripe, peeled tamarind overnight. Drain and pass the pulp through a piece of sinamay. To 1 cup of strained papaya pulp add 1/4 cup of tamarind pulp and 1-1/4 cups of sugar. Boil until thick; pack while hot in well-sterilized jars and seal tightly.

Santol butter. — Boil the fruit until it becomes soft. Pare and cut into small pieces. Pass through a piece of sinamay.

To 1 cup of the strained santol pulp add 1 cup of sugar and boil until thick. Pack in well-sterilized jars and seal tightly. Small amounts of nutmeg, allspice, and cinnamon will improve the favor.

Guanabano butter. — Use the ripe guanabano. Peel and remove the seeds. Pass through a food chopper and then through a sieve or sinamay. To one cup of the strained pulp add 1 cup of sugar and boil until thick. Pack in well-sterilized jars and seal tightly.

Papaya-Guayabano butter. — To 1 cup of strained papaya pulp add 1/2 cup of strained guayabano pulp and 1-1/4 cups of sugar. Boil until thick; pack in well-sterilized jars and seal tightly.

Papaya-Orange butter. — Follow directions under Papaya-Guayabano butter, but use 1/2 cup of orange juice instead of 1/2 cup of strained guayabano pulp.

General Instructions for Making Fruit Pastes

Fruit paste is made in the same manner as fruit butter, except that it is more concentrated and is dried. The finished product resembles candy.

Mango paste. — Pare the ripe mangoes and remove the seed from each. Mash and strain through a piece of sinamay. To each cup of strained mango pulp add 3/4 cup of sugar and boil until very, very thick (until it reaches a boiling point of 222° F.); spread in a butter pan and dry in the sun. Cool and cut into pieces, as desired. Dip in powdered sugar and transfer to sterilized jars or cans and seal tightly.

Nanka, ates, guayabano, papaya, pineapple, duhat, lanzon, and chico can be made into paste by following the directions under Mango paste.

Santol paste. — Boil the fruit until it becomes very soft. Pare and reduce the santol to very fine pieces. Pass through a piece of sinamay. To each cup of strained santol pulp add 1 cup of sugar and boil until very thick. For further directions, see Mango paste.

Tamarind paste. — Peel the ripe fruits and soak overnight in plenty of water. Drain and pass the pulp through a piece of sinamay. To each cup of strained tamarind pulp add 1 cup of sugar and boil until very thick. For further directions, see Mango paste.

Guava paste. — Prepare the guavas as for guava butter. Boil further until very, very thick. For further directions, see Mango paste.

Ube paste. — Wash the ube and boil until very soft. Mash until fine. To each cup of the pulp add 1½ cups of milk and stir until well mixed. Pass through a strainer and boil down until it becomes thick. Then add sugar, little by little, to suit the taste. Boil until very thick. For further directions, see Mango paste.

Papaya-Orange paste.—Pare the fruit and remove all seeds. Mash and pass through a sieve or a piece of sinamay. To each cup of papaya add 1/2 cup of orange juice and boil until thick. Then add 1 cup of sugar and boil down until very thick. For further directions, see Mango paste.

Preserves

Fruit preserves are prepared from fruits and sugar. If well made they keep their form and plumpness and are somewhat crisp rather than soft.

In making preserves one should take great care to use thin syrup at the beginning. If thick syrup is used it will quickly draw the juice out of the fruit and consequently the fruit will shrink and become tough; for after the juice has gone out of the fruit the fruit will be coated with the thick syrup instead of the syrup entering the tissues of the fruit.

Kondol preserve. — Pare the fruit and open; remove all seeds and cut into slices. Soak overnight in lime water, made by dissolving 1 tablespoon of lime in 1 quart of water. Then soak in plenty of cold water for about 2 hours and drain. Boil plenty of water and drop in this the drained sliced kondol; boil for about 5 minutes and drain. To 2 cups of sugar and 1 cup of water and boil. Add to this the sliced kondol and cook until it is soft and tender. Let it stand in the same syrup overnight and then pack in jars and sterilized. Seal completely after sterilization.

Watermelon rind preserve. — Follow instructions under Kondol preserve.

Rimas preserve. — Wash the mature but not ripe fruit. Peel and cut into thin slices. Cook with syrup made by boiling 2 cups of sugar and 1 cup of water. Let stand overnight. Cook again the next morning for about 10 minutes. Cool and pack in jars and sterilizes for 1/2 hour. Seal tightly after sterilization.

Santol preserve. — Boil the fruit for about 3 minutes. Pare thin and cut into quarters. Remove the seeds. Cook in syrup made by boiling 2 parts of sugar and 1 part of water. Boil until the syrup becomes thick.

Green Papaya preserve. Use green papaya. Pare and wash. Open and remove all seeds; cut into desired pieces. Soak in lime overnight and follow directions under Kondol preserve. A few slices of lemon added while cooking will improve the flavor.

Camias preserve. — Use strictly fresh camias. Prick with a pin and slightly press the fruit by rolling a round roller, about 1.9 centimeters in diameter, over it to get rid of the very acid juice; rinse in cold water and boil in plenty of water, using a copper kettle. Squeeze out most of the water. To 2 parts of sugar add 1 part of water and boil in a copper kettle. To this, add the camias and boil for about 15 minutes, or until the fruit becomes green. Let stand overnight and cook again until thick. Cool; pack in jars and sterilize 25 minutes. Then seal the jars tightly.

A copper kettle is used to keep the color of the fruit green.

Lime or Dayap preserve. — Use fresh and immature limes only. With the aid of a sharp knife make narrow cuts about 2 to 2.4 millimeters apart, running spirally around the fruit. Remove the pulp from the inside without altering the shape of the fruit. Boil in a copper kettle containing water and some lime juice until the green color is fixed. Soak overnight in another container in cold water. Then boil once more in water and drain. Make syrup consisting of 1 cup of sugar to 1 cup of water and boil. To this syrup add the lime and boil until thick.

Nipa preserve. — Cut the nipa fruit open and remove the white flesh inside. Use the soft fruits only. Boil 1 cup of sugar and 1 cup of water. To this add the nipa fruit and boil until thick. A few anise seeds added while cooking will give it a better flavor.

Suha Peel preserve. — Use immature suha with a smooth peel. Pare very thin the outer portion of the suha with a sharp knife. Cut lengthwise from 6 to 10 pieces. Remove the pulp and use the thick peeling only. Soak in concentrated brine or salt solution until it becomes very soft. (This takes a few minutes only.) Then squeeze or work it with the same brine for about 10 minutes. Then wash away all the salt with plenty of water. Squeeze or work it well with cold water until the peel is no longer bitter to the taste. Boil in a copper kettle with plenty of water until tender. Then wash with cold water and squeeze out all the water. Drop in syrup made by boiling 2 parts of sugar to 1 part of water and boil until tender. Cool; pack in jars and sterilize for 30 minutes. Seal jars tightly after sterilization.

Pineapple preserve. — Pare the ripe pineapple and remove the eyes. Slice as desired; place in a container alternate layers of sugar and fruit, using 1 part of sugar to 1 part of the fruit, and let stand overnight. Then drain off the syrup and boil for 10 minutes. Add the fruit and continue boiling 15 minutes. Pack in jars and sterilize 25 minutes.

Bignay preserve. — Use ripe bignay. Make a syrup, using 2 parts of sugar to 1 part of water. Add the fruit to the syrup and boil 10 minutes. Let stand overnight and cook again until thick. Pack in well-sterilized jars and sterilize 20 minutes. Seal the jars tightly after sterilization.

General Instructions for Canning Vegetables

With the exception of some minor details, the principles of fruit canning hold good for vegetables. Like fruits, vegetables are sorted, cleaned, blanched, packed and sterilized. Syrup is generally used in canning fruits; brine takes its place for vegetables.

It is safer for a vegetable canner to use well or spring water in making the brine. If such water is unobtainable tap water may be used, if filtered or boiled and allowed to settle, in order to remove the lime and iron impurities. The salt used should be free from chlorides and sulphates of lime, because these will cause the vegetables to become tough. The iron present in tap water, if not removed, will cause discoloration.

As vegetables are usually low in acid they constitute very suitable living quarters for spore-forming bacteria. Therefore, it is of great advantage, in sterilizing them, to use a pressure cooker instead of a steam oven or boiling water.

If vegetables are not strictly fresh, soak them in cold water to restore their crispness. Sort, blanch, and immediately soak in cold water. Cut off undesirable portions, and then cut the remaining portion into desired pieces for canning. Pack in cans or jars; add salt and boiling water or brine; sterilize. If jars are used, seal completely. Cool in an inverted position. Label and store.

Tomatoes, or *camatis*. — Sort and use ripe tomatoes only; blanch to loosen the skin; pack in jars or cans and half seal; add 1 teaspoon of salt to the quart jar; sterilize 30 minutes in boiling water or steam oven, or 15 minutes, in pressure cooker of 5 to 10 pounds; seal completely; cool in inverted position; store.

Tomatoes may be canned with the juice. If water is used instead of juice, the product may be deemed adulterated.

Some use a half teaspoon salt and a half teaspoon sugar instead of salt alone.

Patani. — Known as bakuen, can-a, bialay, buni, buringi, butingi, haba, habichuela, kikilang, kopani, kutakut, caliding, palpalai, parda, perkoles, pinda.

Remove the beans from the pod; blanch and peel off the coating of the bean if desired. Pack in jars or cans and add boiling brine of 1.5 per cent strength. Half seal and sterilize 2 hours in boiling water or a steam oven, or 50 minutes in a pressure cooker of 10 to 15 pounds. Completely seal after sterilization and cool in an inverted position. Label and store in a cool, dry, and dark place. The use of poisonous patani beans should be avoided.

Ampalaya—Known as amargoso, palia, kabiring, papit, paria, pulia, saligun.

Sort and wash; blanch the tender ones and cut open lengthwise; remove the seeds and soft portions where the seeds are embedded; cut crosswise into pieces of desired size, taking care to make them uniform. Pack in jars and add boiling 2 per cent brine; half seal and sterilize (see Patani); completely seal after sterilization and cool in an inverted position. Label and store in a cool, dark, dry place.

Patola. — Known as sikua and timon-anban

Sort and wash; blanch 2 minutes. Pare with a knife and cut into suitable pieces. Pack in jars or cans and add boiling 1.5 per cent brine; half seal and sterilize (see Patani); completely seal after sterilization and cool. Label and store in a cool, dry, and dark place.

Batao. — Known as apikak, baglan, bulai, itab, parda, parada-atap, Sibachi.

Sort and use tender pods only; wash in cold water. String the two ends and cut into pieces if desired; blanch for 2 minutes; cool. Pack in jars or cans; fill with boiling 2 per cent brine; sterilize 2.5 hours in boiling water or steam oven, or 55 minutes in pressure cooker of 10 to 15 pounds; completely seal and cool. Label and store.

Sitao. — Follow directions under Batao, cutting the pods into lengths of about 3.8 centimeters.

Cowpea, or *kibat.* — Known as balatong, batong, karakala, hamtak, otong, sitao.

Follow directions under Batao.

Seguidilla. — Known as amali, batong-balimbing, bulugian, cigarillas, buligon, beyed, kalamismis, kamaluson, palag, palam, parupagulung, karibang, sererella.

Follow directions under Batao.

Upo. — Known as baguang, buliangin, kalubay, sikay, tabungan, tabu-o.

Sort; use tender ones only; wash and remove soft portions and seeds from center; cut into desired pieces. Pack in jars and add boiling 1.5 per cent brine; sterilize 45 minutes in hot water or steam oven completely seal after sterilization and label; store.

Pumpkin or calabaza (as a vegetable). — Sort and use tender ones only; wash, blanch, and peel; cut open and remove seeds; cut into small pieces and pack in jars or cans; add boiling

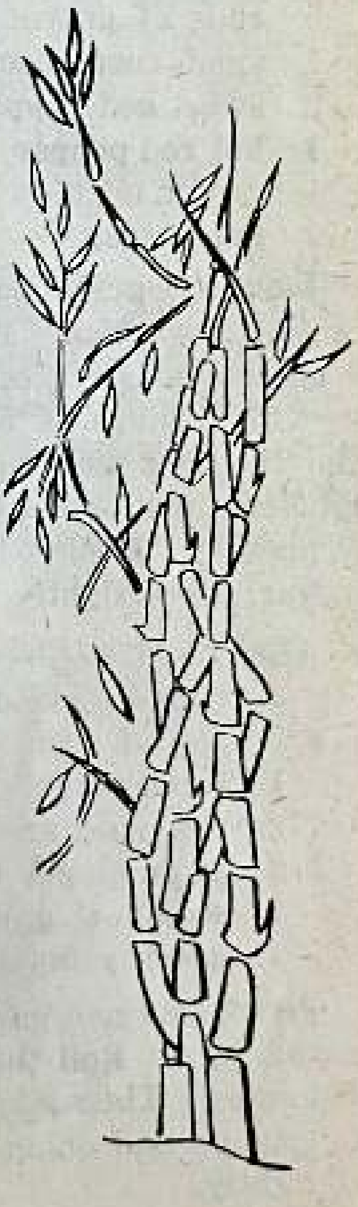
1.5 per cent brine. Sterilize 2 hours in boiling water or steam oven, or 45 minutes in pressure cooker, 10 to 15 pounds.

Calabaza (for pie filler). — Use mature calabaza; wash, blanch 5 minutes, and pare; cut open and remove the seeds; cut into pieces and boil in as little water as possible until soft; pulp and fill sterile jars or cans. Sterilize 2 hours in boiling water or steam oven, or 45 minutes in pressure cooker, 10 to 15 pounds, and completely seal. Label and store. Cook with sugar. If desired.

Habichuelas. — Use tender, freshpods only. String and cut into pieces 1½ to 2 inches long. Blanch in soda solution (made by boiling 1 teaspoonful of soda with 1 gallon of water) for five minutes. Then plunge into a salt solution (made by dissolving 1 tablespoonful of salt to 1 quart of water) for about a half minute. This is done to fix the green color of the vegetable. Drain and pack in jars. Add 1 teaspoon of salt to the quart jar and half that amount of the pint jar and fill with boiling water. Half seal and sterilize 3 hours. Seal tightly after sterilization.

Pea pods (Chicharro). — Follow directions under Habichuelas.

Peas (Guisantes).—Use fresh and tender peas only. Remove the peas from the pod and blanch 3 minutes in soda solution. Then plunge them into the cold salt solution. Drain and pack in jars. Add 2 teaspoon salt to quart jars and fill them with boiling water. Half seal and sterilize 3 hours in boiling water. Completely seal after sterilization.



Some Pickles

Bamboo Shoot Pickle.

4 cups of sliced bamboo shoot
2 sections of garlic.
2 sweet red peppers.
1 hot red pepper.

8 small native onions.
A small piece of ginger.

Take the fresh bamboo shoot and cut into desired pieces. Soak overnight in strong salt solution. This keeps the bamboo shoot white. Boil in plenty of hot water until tender. Drain and pack in jars with the above ingredients which with the exception of the hot red peper and onions, must also have been sliced into small pieces. Arrange the ingredients in the jars in such a way as to make the pickle attractive. Make a solution of 4 parts of vinegar and 1 of sugar and while boiling hot pour in the bottle to cover the products. Seal the jar tightly.

Papaya Pickle.

3 cups of grated green papaya.
1 small cucumber.
2 sweet red peppers.
1 hot red pepper
1 carrot.
1 ampalaya.

Pare the green papaya and grate it. Soak overnight in strong salt solution. Peel the cucumber and carrot; slice; cut the ampalaya into pieces. Soak overnight in strong salt solution with a pinch of alum to make it stay crisp. Wash with water the next morning and drain. Pack in jars, using all the ingredients mentioned above and arranging them in an attractive manner. Pour a hot solution of 4 parts of vinegar and 1 of sugar. Seal tightly.

Half-ripe Papaya Pickle.

4 cups of half-ripe papaya.
2/3 cup of sugar
1 small onion.
1/2 cup vinegar.
1/2 large ginger root.
1 section of garlic.
1 green pepper.

Pare onion and garlic; slice thin. Remove seeds from pepper and slice. Boil the vinegar, sugar, ginger, and garlic for 20 minutes. Then add pepper and boil for 5 minutes longer. Add papaya and onion and boil until clear. Pack in jars and seal tightly.

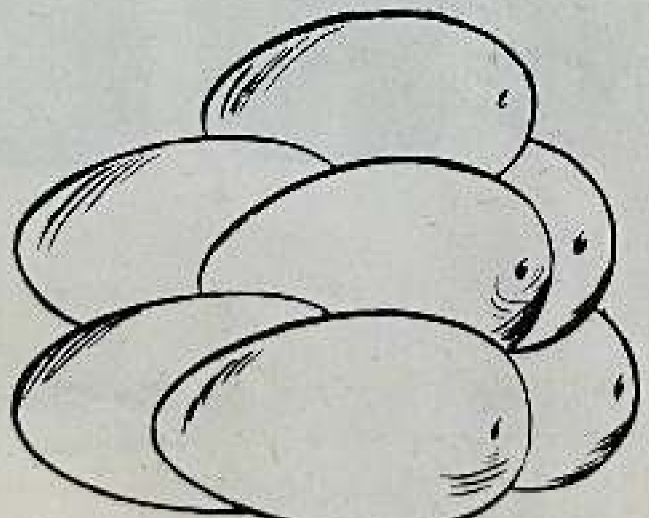
Sinkamas Pickle.

6 cups sliced sinkamas.
2 cups grated green papaya.
3 sections of garlic.
1 small piece of ginger.
3 sweet green peppers.
2 sweet red peppers.
2 hot red peppers.

Peel the sinkamas and cut into desired pieces. Soak over night in strong salt solution with a pinch of alum. Soak the grated green papaya overnight in strong salt solution. Wash the sinkamas and papaya and drain. Slice into small pieces the garlic, sweet green peppers, sweet red peppers, and the ginger, and pack them in jars with the cured sinkamas and grated green papaya. Pour over each jarful a hot solution of sugar and vinegar, made by boiling 3 parts of vinegar to 1 part of sugar. Seal tightly.

Sour pickles consisting of the same ingredients can be made by using vinegar alone.

Sweet Green Tomato pickle.— Cut the green tomatoes into thin slices and add ¼ of the amount of salt. Let stand about 2 hours. Drain out the liquid. Make a solution of 4 parts of vinegar and 2 parts of brown sugar and boil. To this add the tomato and cook until soft. Add small amounts of nutmeg, allspice, cloves, and sinnamon and cook to a thick consistency. Pack in well-sterilized jars and half seal. Sterilize 30 minutes and seal completely.



Kasoy Wine
Banana Wine
Bignay Wine

Chutney

Chutney is a sweet, hot pickle very popular in India. It is usually served with cold meats, sausage, and curries.

Mango chutney

8 cups of sliced mature but not ripe mangoes.
3 small boxes of raisins.
1 large piece of ginger root.
1 hot pepper.
3 segments of garlic.
1 tablespoonful of salt.
8 cups brown sugar.
3 cups vinegar.

Boil the vinegar, salt and brown sugar and strain through a piece of thick cloth. Boil again for about 15 minutes. Add the sliced mango and continue boiling until soft. Add the raisins, then the sliced garlic and hot pepper, and boil 5 minutes. Lastly, add the finely sliced ginger and boil until thick. Pack in well-sterilized jars and seal hermetically.

Hevi chutney. — Use mature but not ripe hevi. Slice into thin slices and follow directions under Mango chutney.

WINE MAKING AND CANNING

By JOSE I. SULIT

The Philippines is blessed with various kinds of fruits that are delicious and highly flavored. This group of fruits are suitable for wine-making, vinegar, fruit juices and syrups.

WINE-MAKING

The fruits used for wine-making are the following:

1. Pineapple
2. Kasoy
3. Duhat
4. Guayabano, and
5. Guava

The pineapple and kasoy fruits are considered juicy and the extracted juice is treated with ¼ the amount of white refined sugar and fermented into fruit wines.

The pure juice is heated to 80°C and then treated with ¼ the amount of sugar while hot; cooled and allowed to ferment with one tablespoonful of Fleichmann yeast per 20 liters of the sweetened juice. After one month the clear wine is syphoned or decanted separating the residue. To the fruit wine is added 5-10 per cent 95% refined alcohol and set aside for one year before serving.

Non-juicy fruits, are treated with equal amount of water and boiled for at least 20 minutes or until cooked; then strained while hot without pressing, and while still hot, the fruit extract is treated with ⅓ the amount of white refined sugar; cooled and treated with one tablespoonful of Fleichmann yeast per 20 litters of the sweetened fruit extract; then allowed to ferment for at least 30 days. The clear wine is syphoned or decanted to separate the residue and then treated with 5-10 per cent of 95% refined alcohol. The wine is set aside for at least one year before serving.

CLARIFICATION OF FRUIT WINE

The finished wines of duhat, kasoy, guava and guayabano are sometimes turbid and acrid due to the tannins present in the wines. In such a case, the wine is treated with 1 per cent solution of egg albumin. The mixture is heated until the precipitates are produced and set aside for them to settle. If the wine is clear, it may be syphoned or decanted but if still turbid, the wine may be passed through a filter with the aid of water suction.

CASUY WINE

Use fully ripe fruit only. Wash and remove the kidney-shaped nuts. Crush the fruit either with a stone or wooden crusher made for the purpose, or (in the absence of these crushers) with the fingers. Press a second time. Measure the juice and to every 4 parts, add one part of first class refined sugar. Heat the sweetened juice 70° Centigrade, or until the scum begins to rise to the surface of the liquid. Cool down to room temperature and add ¼ cake of an ordinary ten-centavo Fleischmann's yeast cake to every 15 to 20 liters (one demijohn) of the juice. Cover the mouth of the fermenting vessel or loosely stopper it and set aside for at least two weeks to allow fermentation. Set aside for another month to settle. Decant the clear wine to a wine barrel and age at least one year before using.

The aged casuy wine is turbid and may be clarified by the following method:

Mix equal amounts of egg albumen and water and to every quart of wine, add 10 cubic centimeters or ¾ tablespoon of albumen solution. Mix well. Heat the mixture in a double boiler until precipitation or curdling is accomplished. Set aside overnight and filter through thick cheesecloth.

FRUIT JUICES AND SYRUPS

Fruit juices may be pasteurized; packed in cans or bottles and processed in boiling water for 10-20 minutes, the length of time depending on the size of containers.

The fruit juices may be treated with twice the amount of sugar and heated just to dissolve the sugar and then packed in cans, jars or bottles and set aside without processing. The amount of sugar used will serve as preservative for the syrup.

GUAVA WINE

Wash fruit and remove the blossom ends. Cut to quarters and boil with twice the amount of water for 30 minutes, or until the guavas are soft. Strain through a piece of cheese cloth and measure. Add ⅓ its amount of sugar, and cool. Then add ¼ cake of the ordinary ten-centavo Fleischmann's yeast to every 20 liters of the sweetened guava extract. Set aside to ferment in a wine barrel or demijohn for at least one month, or until most of the sugar is converted into alcohol and carbon dioxide gas. Set aside further for one month to allow "setting". Then, transfer the clear wine to a clean barrel, close tightly, and age for at least one year. Filter and bottle. Stopper bottle tightly so as not to allow further oxidation.

MANUFACTURE OF VINEGAR

Vinegar may be prepared from coconut water, palm sap, ripe bananas and pure fruit juices, or it may be produced as a by-product in the manufacture of fruit nata.

The manufacture of vinegar is a fermentation process, thereby converting the sugar to alcohol and the alcoholic liquid converted to vinegar with the action of vinegar bacteria found in newly made vinegar.

The coconut water is heated to boiling to remove the scum and then treated with 10 per cent sugar; fermented into alcohol for 21 days and then treated with ¼ to ⅓ of newly made vinegar to convert the alcoholic liquid to vinegar. The time is one month after the addition of the newly made vinegar to the alcoholic liquid.

CANNING OF CORN

Canning of corn is one of the most important of the vegetable canning industries.

Most canned corn are packed in No. 2 cans, or 500 ml. can containers. Canned corn usually appears in two styles, namely:

1. Main style
2. Maryland style

The Main-style corn is obtained by cutting the kernels and scraping the remaining portion of the kernel from the cobs; and mixing the two portions. Enough water flavored with salt and sugar is usually added, to give the desired consistency. Sometimes a little amount of starch is added to give body to the vegetable.

The Mary-land or whole kernel corn, consists of whole kernels cut from the cob and canned with brine solution.

A third style is the double-cut corn known as "cremogenized." The corns are first cut from the cobs; then some of the kernels are cut to a creamy consistency and mixed with the whole kernels; then canned as creamy style corn.

All the cans used for canning corn are lined on the inside with the so-called C-enamel which contains zinc oxide. The main purpose of using zinc oxide is to produce the white zinc sulfide precipitate instead of the black iron sulfide.

Only tender corn of fine quality should be used and should at least be 12 oz. of corn to every No. 2 can. With the necessary amount of liquid the cans are heated to 80° and then sealed hermetically. The vacuum packed corn is processed for 55 minutes at 240°F (10lbs. pressure); 45 minutes at 245°F and 35 minutes at 250°F (15 lbs. pressure).

In filing the cans a head space of ¼ inch should be maintained before sealing.

U.S.D.A. STANDARDS FOR CANNED CORN

The U.S.D.A. standards for canned corn are as follows:

U.S. Grade A Fancy Cream Style corn must be prepared from young tender sweet corn or of a similar variety. The color is bright, and the product possesses a heavy creamlike consistency. It is practically free from defects such as presence of silks, husks, particle of cob, off-colored kernels, etc. The kernels have been cut neatly and uniformly from the cob and are in the early cream stage of maturity. The product possesses a flavor typical of succulent young corn and scores not lowered than 90 points by the U.S.D.A. canned-corn scoring system.

U.S. Grade B (Extra Standard or Choice) canned cream-style corn has similar specifications to those of Grade A except that the word "reasonably" replaces "practically", the corn is in the cream stage and scores 75 to 89 points.

U.S. Grade C (Standard) cream-style corn is of some what poorer quality than Grade B, yet must be palatable, fairly free from defects, and score 60 to 74 points.

Off-grade canned corn is that which scores less than 60.

Cans of corn are considered slack-filled if the head space, measured from the top of the product to the underside of the lid, exceeds 10 per cent of the total inside height of the can. Cans that are slack-filled must be labeled "Below Standard Fill."

CANNING OF TOMATOES

For some time canned tomatoes headed the list of canned fruits and vegetables in quantity but in recent years they have been exceeded by canned corn and peas.

Consumption of canned tomatoes, other than tomato juice, is decreasing due to the production of fresh tomatoes from the home gardens. The increase of canned citrus juice has lessened the demand for canned tomatoes.

The variety of tomatoes for canning should be the moderately large and smooth so that peeling is easily accomplished. The tomatoes should be evenly ripened to a clear red color throughout and should possess a large portion of solid meat of good flavor.

The soft, watery variety and the yellow purple variety are objectionable. A deep uniform red color is desirable. Tomatoes should not only be desirable for canning but also must yield well to be proven profitable. Early ripening is therefore desirable, since yield is largely depended by the length of the season.

Many varieties have been developed for canning purposes and the Stone variety is perhaps the best known and widely grown. It is the medium-sized smooth-skinned, bright red tomato with a large portion of solid meat. It is a regular bearer and ripen over a comparatively short period of time.

The Pearson variety used to be popular in California but the Santa Clara Canner variety was also important but now it is seldom used. It is a variety of large-size, somewhat irregular shape, and of good color and flavor. In Southern California, the Norton variety, a similar variety to the Stone, is also grown for being resistant to fusarium wilt.

The Pearson variety is a heavy bearer of medium-size fruit and is now the most important canning variety in Northern and Central California. The Moran is another variety good for canning purposes. The San Marzano, a small pear-shaped variety, introduced from Italy, is used extensively for paste production. It is also used for canning whole after peeling.

The Matchless variety is being grown in Delaware and Maryland. It is oblate in form in vertical section and circular in the horizontal section. It is of large size and relatively free from corrugations, and the flesh is firm and of reddish-pink color. The pulp around the red cavity is yellowish red. It ripens rather late and is claimed to be more irregular bearer than the Stone variety.

The Paragon is a large, flattened, solid, bright-red tomato of good canning quality. The other varieties being grown outside of California are the Coreless, Perfection, Greater Baltimore, Favorite, Red Rock and Success.

Tomatoes should not be allowed to stand in the field in the sun after picking, because this will cause overripening and development of spoilage organisms. Instead, they should be transported to the cannery as quickly as possible and without undue bruising or crushing in transit.

Tomatoes deteriorate rapidly and should be canned immediately. If there is delay in canning they should be stored in the shade. Tomatoes should be washed and sorted before scalding. In the majority of canning plants, the peelers do most of the sorting. If the washers of tomatoes carefully sort the tomatoes, only the perfect ones go to the scalder and the rotten ones and other small and undesirable fruits go to the pulping line. Only the best tomatoes should be canned. The small badly wrinkle ripened and overripe fruits should be used for the pulping.

Tomatoes that carry a small amount of rot or green may often be prunned and used as Standard. It is customary to core the tomatoes before scalding and peeling.

Tomatoes are scalded sufficiently to loosen the skin but not too long so that the pulp and flesh become soft. Scalding is a process of converting in boiling water or in live steam. The tomatoes are exposed to the live steam from ¼ to one minute, depending on the condition of the tomatoes. As they emerged from the scalder, they are sprayed with cold water or immersed in cold water to check further cooking and at the same time crack the skin. Peeling is essential in order to avoid incipient spoilage.

The tomato is peeled by first pulling the skin back from the blossom end the blade of a short coring and peeling knife. The operation is completed by removing the core with the point of the knife, which is directed toward the center of the tomato to avoid opening the seed cavity. The peeled tomatoes are conveyed by a belt to the canning department.

SPOILAGE OF CANNED FOODS

All canned foods after processing or sterilization are subject to deterioration during storage. Such changes may not render the food unfit for consumption but the appearance of the container or the product becomes unattractive.

The general types of food spoilage are known, namely;

(1) Spoilage by microorganisms

(2) Changes by chemical or physical agencies but microbiological spoilage of canned foods is more serious to food processors.

Spoiled canned foods exhibit various differences in appearance, taste and odor from normal cans. Such common designations of food spoilage may be presented as follows: —

Swell: Swelled cans of foods are usually so badly decomposed as to be unfit for human consumption. They may be poisonous due to the presence of Bacillus botulinus (*Clostridium botulinum*).

Hydrogen Swell: It is caused by the production in the can of hydrogen gas as a result of the corrosion of the tin plate. The food is usually fit for human consumption.

Springer: It is mostly a mild swell caused by over-filling or by insuficient exhausting. The ends of the can of a springer can be pressed in with the hand and will remain concave for a time. Springer, if caused by overfilling underexhausting or corrosion can be used for food.

Flat Sour: This is the cause of can spoilage due to the spoilage microorganisms without gas formation and is normal in outside appearance. The product has a sour taste with a sour odor.

Leakers: Such occurrences are due to (1) faulty sealing, (2) faulty manufacture of the cans, (3) pinholing by corrosion of the cans from the inside or rusting of the can in the inside, (4) bursting of the cans due to formation of hydrogen gas due to spoilage microorganisms and (5) by rough handling of the cans.

DISCOLORATION

Discoloration is common among canned corn with the production of black precipitate of iron sulfide or copper sulfide. Iron sulfide is produced by the action of sulfur present in corn with the iron of the tin cans. This is being remedied by the use of C-enamel cans containing zinc oxide, which cause a white precipitate upon reaction instead of the black precipitate of iron sulfide.

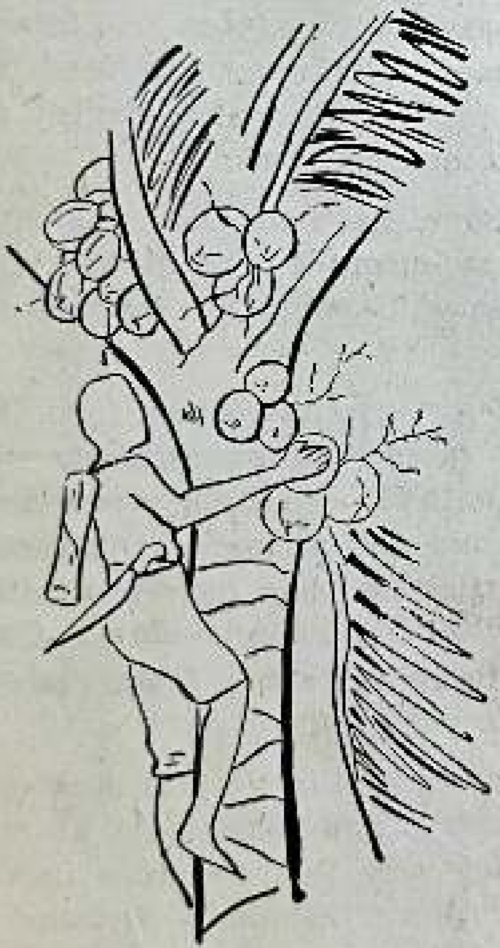
Blackening of peas: A black deposit is sometimes produced in canned peas similar to iron sulfide found in canned corn. The remedy is to can peas as quickly as harvested to avoid the formation of hydrogen sulfide which in turn will react with the iron of the tin cans to produce the black precipitate of iron sulfide.

Chapter III

COCONUT IN OUR DAILY DIET

WHAT THE PLANT UTILIZATION DIVISION, BUREAU OF PLANT INDUSTRY, HAS BEEN DOING TO POPULARIZE ITS USES

By Maria Y. Orosa



It is a well known fact that the present diet of our masses is deficient in fat, proteins, minerals, and vitamins for it consists of a great portion of carbohydrates in the form of boiled rice and a limited amount of protein in the form of fresh or dried fish. I feel sure that no one will disagree with me if I say that the addition of coconut to our present diet will greatly improve it for as we know, coconut is rich in fat and protein. It also contains vitamins and minerals. Dr. Vicente Lava of the Bureau of Science computed that each mature coconut gives 15.1 grams of protein; 116 grams of oil; 10.7 grams of sugar; 8.8 grams of crude fiber; and 4 grams of mineral matter. Laguna nuts were used in the analysis.

The work of Sherman showed that coconut is a poor source of vitamin A, but a good source of vitamins B1 and G. The work of Miller showed that the soft spoon or young coconut has a higher vitamin A content than the mature one. There seems to be a conflicting report on the vitamin C content of coconut, for while some investigators believe that vitamin C is lacking in all forms of coconut, others believe that it is present in the water and in the soft pulp of the young coconut.

Compared with other fats, the coconut oil contains the highest percentage of assimilable glycerides, and it is, therefore, even more digestible than the butter fat.

Vohn's work on coconut proteins showed that it contains all the essential amino acids to sustain a normal growth.

A certain amount of roughage in our diet is conducive to a normal assimilation for the intake of concentrated foods alone is often the cause of digestive disturbances. It follows, therefore, that coconut may be most advantageously used in a diet consisting of breads, crackers, biscuits, cakes, boiled rice and boiled roots such as potatoes, and cassava.

Those who, for certain reasons, have to live on a fruit-vegetable diet, will find that the inclusion of coconut will prove a great advantage, for an addition will supply the fat and protein requirements of the body.

The coconut, besides being a very nutritious food, has some medicinal properties. Very interesting experiments were made in Saigon hospital upon patients suffering from beriberi, neurrasthenia, malarial anemia and pneumonic influenza. Coconut milk has diuretic properties and has beneficial effect upon many cases of acute or chronic kidney troubles. Coconut has been recommended to those suffering from diabetes and who can not indulge in a carbohydrate diet.

Fully aware of the coconut as food, that it is very abundant in many parts of this country, and obtainable at very low prices, and knowing also that very few Filipinos include it in their daily diet; the former Home Economics Division of the Department of Agriculture and Commerce, now Plant Utilization Division of the Bureau of Plant Industry, immediately went to task when the Coconut Industry began to suffer a marked drop in the prices of copra and oil as a result of the coconut crisis. Through the continued efforts of the Plant

Utilization Division of the Bureau of Plant Industry, experiments were made on the diversified uses of coconut for the table and this resulted in the publication of a mimeographed pamphlet containing 35 recipes on coconut which were distributed free of charge to the home makers of the Philippines. These researches on more uses for coconut were continued and about 300 coconut recipes have been formulated and tested. For the present, for reasons of expediency, only 66 recipes are included in this pamphlet, but the rest will be published at a later date which we hope will be a more comprehensive publication for it will not only contain recipes but detailed discussion on coconut.

The Plant Utilization Division does not popularize coconut preparations through the distribution of recipes only, but it holds actual demonstrations to groups of women, and through the services of the Provincial Home Demonstrators appointed under Commonwealth Act 85, and under the direct supervision and control of the Plant Utilization Division, Bureau of Plant Industry, who organize Rural Improvement Clubs in all points of the Philippines to help the women become better homemakers.

For the information of the public, the first teachers of the Model School in Sariaya are members of the staff of the Plant Utilization Division. On the occasion of the inauguration of the Model School of the Nacoco, the Plant Utilization Division concocted a number of coconut preparations such as, cakes; cookies, lumpia and other dishes, and a variety of candies. In connection with the opening of the exhibits on coconuts, and in compliance with the request of the National Coconut Corporation, the Plant Utilization Division will exhibit at the Philippine Trading Center the commercial possibilities of coconut candies which are made to resemble strawberries, bananas, tomatoes, ham. bacon, and sausages, products which were never made, much less exhibited in public.

According to our computation, if one half of the population of the Philippines will include coconut in their daily diet, and if each average family consisting of five members will consume two coconuts per day, we shall consume one third of our total yearly production which is approximately three and one half billion nuts.

For better health and for the benefit of the coconut industry let us include more coconut in our daily diet.

Let us also congratulate the National Coconut Corporation whose present efforts are directed towards a better health of the Filipinos through increased home consumption of coconut, and a more prosperous coconut industry by improving the Philippine copra through government standardization, and the industrialization of coconut by-products.

COCONUT RECIPES*

COCO PINEAPPLE MASAPAN

2 cups grated coconut, chopped finely
1 tablespoon flour
1 small can evaporated milk
2 cups sugar
1 cup pineapple, chopped finely
Egg whites for brushing
2 tablespoons evaporated milk
2 egg yolks, beaten lightly

Mix COCONUT, pineapple, evaporated and COCONUT milk, and sugar, and cook in a copper vat. Stir constantly while cooking. When the mash reaches the consistency of a thick jam, remove from fire and cool. Add egg yolks, flour, and mix well. Continue cooking until the mass no longer sticks to the finger when touched. Fill candy paper cups and brush top with slightly beaten egg whites to which was added about 2 tablespoons evaporated milk. Bake in a hot oven until brown.

COCONUT ECONOMY CAKE

⅔ cup flour
1 teaspoon baking powder
2 teaspoons shortening
⅔ cup sugar
1 egg, well beaten
½ cup coconut milk
¼ teaspoon vanilla

Sift flour and baking powder three times. Cream butter and sugar. Add egg and mix well. Add flour gradually alternately with milk. Add vanilla and mix well. Bake in a moderate oven.

COCONUT HOT CAKE

1 cup coconut milk
1½ cup cassava flour
3 eggs
1 teaspoon baking powder
1 tablespoon sugar
¼ teaspoon salt

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* Including other recipes as collected from the files.

Beat eggs; add milk and flour sifted with dry ingredients 3 times alternately. Drop by spoonfuls in a greased pan and cook until both sides are brown. Serve with COCO honey.

MAMMY'S FAVORITE PUDDING

1½ cups grated coconut
1 cup coconut milk
3 cups bread toasted and cut in small cubes
1½ cup sugar
1½ cups water
1 small box raisins
1 teaspoon nutmeg

Mix above ingredients. Pour in greased muffin pans. Bake in a moderate oven. Serve with sauce made as follows:

½ cup coconut, grated
1 cup coconut milk
1 cup sugar
1 teaspoon vanilla
¼ teaspoon salt
2 tablespoons corn starch

Mix all ingredients and cook in a double boiler about 10 minutes. Add coloring and continue cooking 5 minutes longer. Pour over pudding just before serving.

PACIENCIA BUKO SOUP

1 cup buko, cut in small squares
2 cups chicken broth
¾ teaspoon aslt
1 segment garlic, pounded
1 tablespoon fat
1 cup coconut milk

Saute garlic and remove when brown. Place broth on pan where garlic was browned, and let boil. Add BUKO and season with salt. Add coconut milk and immediately remove from fire. Serve with croutons if desired.

SUNSHINE SOUP

1 cup buko, cut in small pieces
1 cup coconut milk
2 cups beef stock
1 tablespoon fat
1 small segment garlic, pounded
½ cup string beans cut finely
1 teaspoon salt
Pepper to taste

Fry garlic and remove when brown. Add stock and when boiling, add string beans and cook until tender. Drop BUKO and boil 2 minutes. Add coconut milk, bring to a boil, and immediately remove from fire. Season with salt and pepper. Serve hot.

BUKO-CHICKEN SOUP

2 cups buko, cut to small pieces
1 cup boiled cassava cut to small cubes
10 cups chicken broth
Salt and pepper to taste

Strain chicken broth. Season with salt and pepper to taste, and bring to a boil. Add BUKO and cassava in the boiling broth and boil two minutes. Serve hot.

BUKO-PILI SOUP

- 1 cup buko, chopped fine
- 1 cup coconut milk
- ¼ cup beef, chopped fine
- 1 tablespoon green onion chopped fine
- 1 teaspoon salt
- ¼ teaspoon pepper
- 2 tablespoons corn starch
- 1 egg
- 6 cups beef broth
- 3 tablespoons pili nut, roasted and chopped finely

Mix all ingredients excepting the broth and the COCONUT milk. Drop the mixture by teaspoonfuls in deep, hot fat. Fry until brown and drain.

Strain beef stock. Boil and season with salt and pepper to taste. Add COCONUT milk. Serve with the fried BUKO mixture.

MOCK MACARONI WITH CHEESE

- 1 cup buko (grated with makapuno grater)
- ¼ cup grated cheese
- 1 tablespoon finely chopped onion
- ½ cup tomato catsup

Saute onion. Add catsup and cook 2 minutes.

Place grated BUKO in a baking pan or pyrex casserole and pour tomato catsup over it and mix. Sprinkle evenly on top grated cheese and bake in a moderate oven until the top browns.

BUKO LUMPIA

- 2 buko grated
- ¼ cup shrimps, sliced
- ¼ of a cabbage, sliced fine
- ⅓ cup pork, sliced
- ½ cup soy beans (cooked)
- A few sections garlic, sliced
- ⅓ onion, sliced fine
- Lumpia wrappers

Saute garlic, onion, pork, shrimps, soy beans, cabbage and BUKO. Season with salt to taste. When done, wrap in lumpia wrappers. Serve with lumpia sauce.

BLUSHING BUKO

- 1 cup buko, grated
- ¼ cup boiled shrimps, chopped
- 2 eggs, stiffy beaten
- 3 tablespoons lard
- 2 tablespoons corn starch
- salt and pepper to taste

Mix BUKO, shrimps, salt, pepper, and corn starch. Add well beaten eggs. Pour mixture in a hot frying pan containing hot lard, spreading the mixture in the pan evenly. Cook until light brown. Turn over to brown the other side. Cut in squares and serve with tomato catsup.

BUKO MOONLIGHT

- 1 cup buko, cut in small pieces
- 3 tablespoons boiled shrimps, sliced in pieces
- 2 eggs, beaten
- 3 tablespoons thick shrimp stock
- Salt to taste
- Fat for frying
- Celery leaves for granishing
- 2 tablespoons flour

Mix flour and shrimp stock; add shrimps, BUKO, and salt. Fold in beaten eggs. Drop by tablespoonfuls in hot fat and fry until brown. Garnish with celery leaves. Serve hot.

BUKO-AMPALAYA VEGETABLE DISH

- 1 cup buko, cut in pieces
- 1 cup ampalaya, worked in salt, and washed thoroughly
- 2 tablespoons shrimps, cut to pieces
- 2 tablespoons pieces of pork,
- ½ cup shrimp stock
- 2 tablespoons lard
- 1 segment garlic
- ¼ onion, sliced fine
- Salt to taste
- 1 tablespoon "bagoong"

Saute garlic, onion, shrimps, pork, and "bagoong." Add stock and boil; add ampalaya and stir. Cook until tender. Season with salt. Add BUKO and cook two minutes longer.

BUKO SURPRISE

- 1 cup buko, cut in strips
- ¼ cup pork, cut in strips
- 1 tablespoon shrimps, cut in pieces
- ¼ onion, chopped
- 1 segment garlic, pounded
- 1 tablespoon green onion, chopped
- 2 tablespoons fat
- ½ cup coconut white sauce
- 4 tomatoes, regular size
- Salt and pepper to taste

Sautè garlic, onion, shrimp and pork. Season with salt and pepper. Add BUKO and green onion and set aside. Cut a round opening on the stem end of tomato, remove seeds, drain juice, and stuff with prepared mixture. Cover top with COCONUT white sauce.

WHITE SAUCE

- ½ cup coconut milk
- 1 teaspoon salt
- 1 teaspoon corn starch
- 1 tablespoon fat

Heat fat and add corn starch; stir well. Season. Add COCONUT milk and stir continuously until it boils, and the sauce thickens.

"BUKO" OMELET

½ cup buko, shredded
¼ cup pork, ground
1 potato, diced
2 tablespoons lard
2 eggs
1 small onion, finely chopped
1 section garlic, finely chopped
Salt and pepper to taste

Saute garlic, onion, and pork. Add BUKO and potato. Season with salt and pepper. Continue cooking until done. Beat aggs; put in a frying pan in which lard has been heated and pour the cooked mixture over it. Continue frying, folding over the eggs. Fry on all sides until brown. Serve hot.

RURAL IMPROVEMENT CLUB LUMPIA

2 cups buko, cut in strips
1 cup cabbage, cut in strips
½ cup sincamas, cut in strips
½ cup shrimps, cut in pieces
1 cup shrimp stock
½ cup par boiled pork, sliced in pieces
½ cup pork stock
1 segment garlic, minced
½ onion, medium sized
4 tablespoons lard
Toyo to taste
Lumpia wrappers
Fresh, native lettuce

Saute garlic, onion, shrimp, and pork. Add toyo and cook 1 minute longer. Add shrimp stock and stir while adding. Boil 5 minutes. Add cabbage, sincamas, and BUKO. Cook until tender. Add pork stock. Continue cooking 5 minutes longer. Cool partially before wrapping, lining each lumpia with a lettuce leaf.

Serve with sauce made as follows:

¼ tablespoon corn starch
1 teaspoon salt
1½ tablespoons sugar
1 cup water
1 tablespoon toyo

Mix all ingredients and stir well to suspend starch uniformly. Cook over a slow fire until the paste thickens to the desired consistency.

BUKO RURAL CHOPSUEY

1 cup buko, diced
¼ cup coconut milk
½ cup cabbage, diced
½ cup green papaya, sliced thinly
2 tablespoons shrimps, cut in pieces
¼ onion, sliced
2 tablespoons lard
1 teaspoon salt
1 teaspoon toyo
2 tablespoons kinchay
½ cup shrimp stock
1 tablespoon corn starch
A dash of white pepper
1 segment garlic, minced

Saute garlic, onion, shrimp, and pork. Add shrimp stock and stir. Add cabbage and papaya. Cook until tender. Add

BUKO, then COCONUT milk; season with salt, pepper, and "toyo." Thicken sauce with corn starch and allow to boil two minutes. Add "kinchay" just before removing from fire.

BUKO WITH BAGOONG

- 1 cup buko, cut in pieces
- ½ cup coconut milk
- 2 tablespoons coconut oil, or lard
- ½ cup string beans, sliced in
- 2 tablespoons "bagoong" pieces
- 1 segment garlic, pounded
- ¼ onion, sliced
- 1 tablespoon pork, cut in small pieces
- ¼ cup pork stock
- Salt and pepper to taste

Sautè garlic, onion, pork, and "bagoong"; continue sauteing until pork is brown. Add stock and boil. Add string beans and cook until tender. Add BUKO, COCONUT milk, and boil. Season with salt and pepper and remove from fire. Serve hot.

RURAL IMPROVEMENT CLUB BUKO PANSIT

- 2 cups buko, cut in long strips
- ½ cup cabbage, cut in strips
- 3 tablespoons shrimps, sliced
- 3 tablespoons pork, par-boiled and sliced
- ¼ cup shrimp stock
- 1 segment garlic, minced
- ¼ onion, sliced
- 1 teaspoon toyo
- Salt and pepper to taste
- 3 calamansi, cut in halves, crosswise

Sautè garlic, onion, shrimps, and pork; add shrimp stock and boil. Add cabbage and continue cooking until tender. Season with toyo, salt and pepper. Add BUKO and mix well. Serve with calamansi in halves.

BUKO MOCK VALENCIANA

- 2 cups buko, diced
- 8 cups thin coconut milk
- 1 spring chicken, dressed and cut in pieces
- 3 cups "malagkit" (glutinous rice), washed and drained
- 1 cup boiled soy beans, or 1 cup boiled sweet green peas
- 2 red sweet peppers, broiled, peeled, and cut in pieces crosswise
- 4 tablespoons fat
- 2 eggs, hard boiled and sliced thinly, crosswise
- 2 segments garlic, minced
- Salt to taste
- Banana leaves

Saute garlic; add chicken; season with salt and cook until brown. Add COCONUT milk. Bring to a boil; add "malagkit" and stir well. Cover with pieces of banana leaf. Stir from time to time to prevent burning. When almost done, add the greater portion of soy beans or boiled sweet green peas and pepper, leaving the rest for garnishing. Add BUKO, and mix well; continue cooking until done.

Place in a platter and garnish with the remaining soy beans, pepper, and the sliced hard boiled egg. Serve hot.

SHRIMP STUFFED WITH BUKO

¼ cup buko, shreded
1 egg
"Unto sin sal"
2 tablespoons flour
"Ticoy" cover
2 tablespoons starch
1 teaspoon green onion, chopped finely
Pepper and salt to taste
Fat for frying
12 fair-sized shrimps

Shell shrimp but do not remove tail. Open back with knife and fill with mixture of shredded BUKO mixed with small amount of finely chopped green onions, salt, and pepper. Wrap with "unto sin sal" lined with "ticoy" cover, and dip in mixture of well-beaten egg, starch, and flour. Fry in deep, hot fat. Serve hot.

MOCK MACARONI SALAD

2 cups buko (malakanin) grated with "makapuno" grater
½ cup boiled chicken, flaked
½ cup sweet pickles, cut in strips
1 cup pineapple, cut in strips and drained well. (If the pineapple is sour, boil in 1 to 1 syrup 5 minutes; cool, and drain.)
¼ cup grated cheese
1 cup mayonnaise

Mix all ingredients and chill. Garnish and serve.

BUKO SALAD

2 cups buko, cut in small squares
½ garden beet, boiled and cut in small cubes
3 regular sized potatoes, boiled and cut in small cubes
1 carrot, boiled and cut in small cubes
¼ cup shrimp, boiled and cut in pieces
10 "camias" or sweet pickles, diced finely
2 green onions, washed and cut in small pieces
Salt and pepper to taste

Marinate all ingredients and drain well. Add mayonnaise and salt; chill. Garnish and serve cold.

MAYONNAISE

¼ teaspoon pepper
½ teaspoon mustard
1 teaspoon sugar
1 teaspoon salt
2 tablespoons calamansi juice vinegar
1 egg yolk
1 cup coconut oil, highly refined

Mix dry ingredients, add egg yolk and beat well. Add 1 teaspoon calamansi juice or vinegar. Add oil in very small quantities, beating constantly while adding. Continue adding oil slowly until it is all used. Add the remaining calamansi juice or vinegar, beating vigorously while adding.

BUKO SCONES

½ cup buko
1 cup flour
1½ teaspoons baking powder
2 tablespoons sugar
⅓ tablespoon shortening
1 egg
¼ cup milk
¼ teaspoon salt

Sift dry ingredients three times and work in shortening. Beat egg and add to the milk. Add mixture to dry ingredients and mix well to form dough. Roll to 1/2 inch thick on a floured board and cut in a biscuit cutter. Brush top with butter and sprinkle with sugar. Bake in hot oven until brown.

BUKO DELIGHT

½ cup buko, cut to small pieces
¼ cup green corn chopped fine
½ cup water
3 drops vanilla extract
½ cup sugar

Boil corn with water until tender. Add sugar and BUKO. Continue boiling until it reaches the consistency of a jam. Add vanilla just before removing from fire and pour mixture in a mold. Cool before serving.

BUKO "PASTELITOS"

1 cup buko, sliced fine
½ cup sugar
1 egg, slightly beaten
1 tablespoon cassava starch
1 teaspoon vanilla

Cook BUKO and sugar together. When thick, remove from fire and allow it to cool. Mix beaten egg and starch and add to the first mixture. Continue cooking till it thickens. Add vanilla and set aside. Prepare the dough as follows:

1 cup sifted flour
4 tablespoons shortening
4 tablespoons cold water
1 egg
¼ teaspoon salt

Sift flour and salt. Add shortening and work with two knives. Add water by spoons and work with the fingers. Roll dough to a thin sheet and divide into halves. Spread filling thinly and evenly on one half of the sheet and cover it with the other half.

Press well and cut in uniform pieces of 1/2 inch wide and 1-1/2 inches long. Brush top with beaten egg and bake until brown.

MASAPAN DE BUKO No. 1

¾ cup sugar
1 cup ground buko
1 tablespoon wheat or cassava flour

Mix BUKO and sugar and cook until thick. Add the flour made to a thin paste by cooking it with water. Continue cooking until thick enough to be shaped into desired forms. Bake in a greased baking tin until brown.

MASAPAN DE BUKO No. 2

2 cups ground buko
1 cup milk
½ cup sugar
1 egg

Mix BUKO, milk, sugar, and egg and cook until thick. Add flour made by cooking to a thin paste with a small amount of water, and continue cooking until the mixture thickens. Form into balls. Bake in greased baking tin until brown. Brush with butter when done.

MASAPAN DE BUKO No. 3

2 cups finely choped buko
3 cups sugar
1 large can evoporated milk
4 eggs
2 tablespoons butter
1 teaspoon finely chopped lime (dayap) rind or ½ teaspoon vanilla
1 tablespoon corn starch

Mix BUKO, sugar and milk. Cook in a "tacho" (copper vat) over a moderate fire. When thick, remove from fire to cool. Beat egg yolks, corn starch and lime rind, or vanilla, together. Add to buko-sugar mixture and cook again to a thick consistency to form soft balls. Add butter just before removing from fire. Mix well.

Place in paper candy cups and brush top with egg white beaten with a small amount evaporated milk. Bake in moderate oven until light brown.

"BUKO" PUDDING No. 1

Meat of 2 bukos, shreded
1 tablespoon butter
1 egg
½ cup coconut milk
1 teaspoon vanilla
3 tablespoons cassava flour
⅓ cup sugar

Mix BUKO, milk, sugar, and melted butter. Add well beaten egg and flour. Pour into a greased baking dish, set in a pan of hot water and bake in a moderate oven.

"BUKO" PUDDING No. 2

½ cup chopped buko
1½ tablespoons cornstarch
½ cup sugar
1 cup milk
1 egg
1 teaspoon vanilla

Make a thin paste with cornstarch and milk. Put in a double boiler, and boil 15 minutes. Remove from the fire and add beaten egg. Add BUKO, sugar, and vanilla. Put again on the fire and stir constantly until thick, and creamy. Transfer to a mold and place in the refrigerator to chill. Serve cold.

BUKO SURPRISE

Meat of buko, diced
8 strips gulaman (agar-agar)
1 cup refined sugar
1 cup water
1 teaspoon vanilla

Wash gulaman; boil in one cup water until dissolved. Add sugar and let boil. After 2 minutes boiling, strain through a piece of cheese cloth. Color, if desired, with a small amount of certified food coloring. Add well drained young coconut (BUKO). Add vanilla. Mix well, pour into molds and set aside to cool. Stir twice at about 5 minutes interval, to distribute meat evently. Allow to cool. Remove from mold and serve cold. Enough to serve 12 persons.

BUKO SHORT CAKE

Meat of 2 bukos
2 tablespoons milk
1 tablespoon sugar
2 teaspoons baking powder
¼ teaspoon salt
1½ tablespoons shortening
1 cup flour

Sift dry ingredients together. Work in butter or other shortening; add milk to make a soft dough. Roll on floured board to desired thickness and cut with a biscuit cutter. Bake in a hot oven 20 to 25 minutes. Split batter, and fill with shredded coconut previously sweetened with sugar and chilled. Top with the shredded coconut mixture. Serve with coconut cream ("kakang gata") and sugar.

BUKO-CHOCOLATE CAKE

½ cup buko
1½ cups flour
½ teaspoon baking powder
½ cup sugar
¼ cup milk
2 tablespoons cocoa
¼ cup butter
½ teaspoon salt
1 egg

Melt butter and add the cocoa. Remove from fire, add sugar, and beat well. Add well-beaten egg and grated BUKO. Mix in the milk alternateiy with flour sifted with baking powder and salt. Pour in a greased cake pan and bake it in a hot oven 30 to 40 minutes.

BUKO COOKIES

½ cup buko (shredded)
½ cup sugar
1 cup flour
1 egg yolk
¼ cup shortening
1 tablespoon milk
1 teaspoon baking powder
¼ teaspoon salt

Cream shortening and sugar. Add egg yolk and BUKO, and mix well. Add milk, then flour sifted previously with the dry ingredients. Mix, transfer to a floured board, and roll to 1/4 inch thick. Cut with a cookie cutter and brush with egg yolk. Bake in a moderate oven until brown.

BUKO FANCIES

1 cup buko, finely chopped
½ cup flour
½ cup sugar
¼ teaspoon vanilla
⅓ teaspoon salt
2 eggs
2 teaspoons melted butter

Beat eggs well; add sugar and continue beating; add melted butter and the other ingredients. Blend well. Put in buttered muffin pans and bake until slightly browned.

BUKO DESSERT

3 cups buko, diced
1 cup ubi, diced
1 cup gabi, diced
1 cup saba, diced
1 cup nangka, diced
½ cup tapioca pearls
½ teaspoon toasted anis seeds
2 cups thick coconut milk
10 cups thin coconut milk
3 cups sugar

Boil tapioca, ubi, and gabi in thin COCONUT milk, stirring constantly. When half done, add saba and nangka. When all ingredients are tender, add sugar and BUKO. Boil 2 minutes and add anis before removing from fire. Serve with thick COCONUT milk.

BUKO-CONDOL PARADISE

1 cup buko (malacanin), grated
1 cup condol, chopped finely
1 tablespoon corn starch or flour
1 cup coconut milk
¼ teaspoon vanilla or grated lemon peel, shopped fine
1 egg yolk
1½ cups sugar
1 cup evaporated milk

Mix BUKO, condol, sugar, COCONUT, and evaporated milk. Cook in copper vat. Stir constantly while cooking to prevent burning. When half done, remove from fire. Beat egg yolk slightly, add to BUKO mixture, and stir well. Add flour from sifter; then vanilla or lemon rind. Cook mixture to soft ball stage. Remove from fire. Drop in paper candy cups, or greased baking pan and bake until light brown.

FIESTA BUKO CUPS

2 cups buko, cut in pieces
½ cup bread crumbs
¼ teaspoon cinnamon or vanilla
2 tablespoons raisins
2 eggs
1 cup milk
½ cup water
1 cup sugar

Beat eggs; add sugar, milk, bread crumbs, BUKO, raisins, and flavoring. Mix thoroughly.

Pour in muffin pans previously lined with caramel syrup.

Bake in moderate oven placing muffin pans in pan half filled with boiling water.

BUKO CUSTARD

1 cup buko, sliced in pieces
1 cup coconut milk
1 cup milk, evaporated
4 egg yolks
1 tablespoon lemon rind
1 cup sugar
1 cup brown sugar
⅓ cup water
2 egg whites

Beat egg yolks and whites together; add sugar, lemon rind, COCONUT and evaporated milk, and BUKO. Set aside. Caramelize brown sugar and add water to make thick syrup. Line mold with caramelized syrup and when cooled, fill mold 2/3 full with custard BUKO mixture. Cook in moderate oven or in boiling water, covering mold with a sheet of tin on which is placed live charcoal.

BUKO ICE

3 cups buko, (very soft) scraped with a teaspoon
9 cups coconut water
3¼ cup sugar

Mix all ingredients and freeze.

BUKO SHERBET

3 cups buko
4 cups coconut water
3½ cups evaporated milk
2¾ cups sugar

Mix all ingredients and freeze.

BUKO TOFFEE NO. 1

1 cup coconut milk
¼ cup sugar
2 tablespoons buko, chopped
1 tablespoon glucose

Mix all ingredients except chopped BUKO. Cook on a low fire until it forms a solid mass. Add chopped BUKO and continue cooking a few minutes longer. Transfer to a buttered board and allow to cool partially. Form to small balls and wrap in wax paper.

BUKO TOFFEE NO. 2

1 cup buko, chopped finely
1 cup coconut milk
1 cup milk
4 tablespoons glucose
1½ cups sugar
1 teaspoon grated lime rind

Mix milk, COCONUT milk, sugar, and glucose. Cook until thick. Add lime rind and BUKO and continue cooking until it reaches the soft ball stage. Place on a greased board, roll to a sheet of about 1/4 inch thick. Cool and slice in squares. Roll in sugar and wrap in wax paper.

BUKO-LINGA TOFFEE

Follow procedure under BUKO TOFFEE NO. 1, adding 3 tablespoons sesame seeds, (linga).

BUKO COCOA CANDY

1 cup buko, finely chopped
¾ cup coconut milk
⅔ cup sugar
1 tablespoon cocoa

Mix all ingredients and cook until very thick, stirring constantly while cooking to prevent burning. Transfer while hot on greased board and roll to about 1/4 inch thick. Cool and cut to desired pieces.

COCONUT STRAWBERRIES

4 cups grated coconut, chopped finely
1 cup ripe papaya pulp, mashed
1 cup fresh strawberry, mashed
3 cups sugar
6 tablespoons glucose
1 teaspoon toasted anise seeds
Food coloring; red and green

Cook COCONUT, papaya, strawberry, sugar, and glucose in a copper vat, stirring constantly while cooking, until thick.

Separate 1 cup of mixture and add green food coloring. Color the rest with red. Continue cooking to soft ball stage. Transfer to a greased board. Shape into strawberries. Make small leaves out of the green mass and place on each stem end. Insert a piece of green colored toothpick on the stem end to resemble fresh strawberry. Dot with a few anise seeds.

COCONUT HAM

- 14 cups grated coconut, finely chopped
- 6 cups ripe papaya pulp, mashed
- 16 tablespoons glucose
- 6 tablespoons calamansi juice
- 40 pieces cloves

Cook all ingredients together in a copper vat, stirring while cooking, until thick. Set aside 2 cups in one container, 4 cups in another and color the remaining portion with a mixture of 2 teaspoons red food coloring, 1 teaspoon green, and 1 teaspoon of violet, so that it will resemble the color of the meat of cooked ham. Transfer to a platter and shape to a leg of ham.

Color the 2 cups COCONUT mass with yellow, roll out to a thin sheet, and cover the mass in the platter, pressing well so that the sheet sticks to the ham-like mass.

Color the 4 cups portion with a mixture of red, green, and violet for coloring to imitate the browned surface of the cooked ham after having been sprinkled with sugar and scorched with a red hot flat iron. Roll out to a sheet and cover the entire leg.

COCONUT CALAMANSI

- 5 cups coconut, grated and chopped finely
- 2 cups ripe papaya, mashed
- 1 cup grated peel of ripe calamansi
- 4 cups sugar
- 7 teaspoons calamansi juice

Cook all ingredients in a copper vat, stirring while cooking until thick enough to form into soft balls. Add green food coloring to obtain the natural color of a green calamansi fruit. Continue cooking to soft ball stage. Place on a greased board and shape to resemble calamansi fruit. Stick a piece of toothpick dyed green, on stem end.

COCONUT TOMATO

- 3 cups grated coconut, chopped finely
- 1 cup tomato pulp
- 2 cups sugar
- 4 tablespoons glucose
- 4 teaspoons calamansi juice
- Red food coloring
- Green food coloring

Cook COCONUT, tomato, sugar, and glucose in a copper vat, stirring constantly until half done. Add calamansi juice and stir well. Separate 1 cup of COCONUT mixture, and color green. Color the remainder with red. Continue cooking both separately until done. Shape the red mixture so as to resemble tomato. Shape the green mixture to forms resembling sepals and attach to stem end of each tomato-shaped COCONUT with a piece of toothpick dyed green.

COCONUT SWEET RED PEPPER

- 3 cups grated coconut, chopped finely
- 1 cup ripe papaya, mashed
- ⅓ cup glucose
- 2 cups sugar
- 3 teaspoons calamansi juice

Cook and follow the same procedure under COCONUT TOMATO, shaping to forms resembling large, sweet red pepper.

RAINBOW BUKAYO

- 6 cups grated coconut
- 3 cups ripe papaya, mashed
- 3 cups sugar
- 8 tablespoons calamansi juice
- 8 tablespoons glucose
- 2 teaspoons vanilla
- Food coloring: red, green, and light orange.

Cook COCONUT, sugar, papaya, and glucose in a copper vat until half done. Add calamansi juice, and cook until mixture is done. Divide the mixture into 3 equal parts, coloring each part with a different food coloring. Continue cooking each mixture to soft ball stage. Add vanilla just before removing from fire. Place on a greased board and roll to about 1/2 inch thick. Place each colored mixture on top of each other. Press with a rolling pin and smoothen the surface. Put aside to cool. Cut into bars, roll in sugar, and wrap in wax paper.

COCONUT BACON

Mixture No. 1:

- 4 cups grated coconut, chopped finely
- 2 cups ripe papaya pulp, mashed
- 4 tablespoons calamansi juice
- 1 teaspoon vanilla
- Red coloring
- 2½ cups sugar

Mix all ingredients except calamansi juice and vanilla. Cook in a copper vat until thick. Add calamansi juice, vanilla, and red coloring, and continue cooking until it thickens to such a consistency that it will form to any desired shape. Place on a greased board and cool. Divide into 4 equal parts and roll each to about 1/4 inch thick.

Mixture No. 2:

- 4 cups grated coconut, finely chopped
- 2 cups sugar
- 1 teaspoon vanilla
- 3 teaspoons calamansi juice
- Lemon yellow food coloring
- 4 tablespoons glucose

Mix COCONUT, sugar, and glucose and cook in a copper vat (tacho). Stir while cooking. When thick, add yellow color, vanilla, and calamansi juice. Continue cooking until it reaches the consistency as described in Mixture No. 1. Divide into 5 equal parts and place on a greased pan. Roll each portion to a sheet about 1/5 inch thick.

Place all pieces, one on top of another, alternating the red and white sheets. Press with a rolling pin to bring the pieces together so as to form one single mass. Smoothen the sides. Slice thinly, as in bacon before serving.

COCONUT BOLOGNA

- 10 cups grated coconut, chopped finely
- 4 cups ripe papaya pulp
- 1 cup tomato pulp
- 6 cups sugar
- 1 teaspoon vanilla
- 1 cup pili nuts, chopped
- 3 teaspoons red food coloring
- 1 teaspoon yellow food coloring
- 1 teaspoon green food coloring
- ½ teaspoon violet food coloring
- 1 cup glucose
- 2 cellophane tubes of 2½ inches in diameter and 10 inches long.

Cook the coconut, papaya, tomato, sugar, and glucose in a copper vat until half done. Add the food coloring by drops until the "bologna" color is obtained. Continue cooking and stir until done and place on a greased board to cool. Work with the fingers to make the mixture smooth. Mix the pili nuts. Shape the mixture into balls to facilitate the filling of the celophane tubes. Twist the ends of the tubes to pack the mass tightly in tube. Tie ends. Hang overnight. Slice to thin pieces crosswise. These pieces may be used as sandwich filler.

COCONUT SAUSAGE

8 cups coconut, grated and finely chopped	6 cups sugar
3 cups ripe papaya, mashed	12 tablespoons glucose
	Food coloring: red and green

½ cup calamansi juice

Mix all ingredients and cook in a copper vat. When half done, drop red and green food coloring to the mixture until meat color is obtained. Continue cooking until it reaches a consistency that will form to any desired shape. Place on a greased board and cool. Roll to long, smooth forms resembling "hot dogs" of about 1/2 inch in diameter and 5 inches long. Wrap in cellophane; tie ends and hang overnight to harden.

MAGIC COCONUT EGGS

Mixture No. 1:

4 cups grated coconut, chopped finely	1 tablespoon calamansi juice
2½ cups sugar	½ teaspoon vanilla
2 egg whites	½ cup powdered "Sea Island" sugar

6 tablespoons glucose

Mix COCONUT, sugar, and glucose. Cook in a copper vat and stir constantly. When half done, add calamansi juice and continue cooking until soft balls may be formed. Add vanilla just before removing from the fire. Add egg whites previously beaten stiff with some island sugar. Place in a greased board and set aside.

Mixture No. 2:

Mix COCONUT, papaya and glucose. Cook in a copper vat and stir well. When half done, add calamansi juice and continue cooking until it reaches a consistency so that any desired shape may be formed. Put on a greased board and allow to cool. Form to small round balls, the size of an egg yolk. Cover uniformly with Mixture No. 1 and form to resemble eggs. Smoothen the outside by rolling on marble, or a smooth board.

EASTER COCO EGGS

Follow the same procedure as in MAGIC COCONUT EGG. Color the outside with certified red food coloring.

IMPROVED BUKAYO

3 cups grated coconut, chopped finely
1½ cups sugar
6 tablespoons glucose
8 tablespoons calamansi, chopped finely

Mix COCONUT, sugar, and glucose. Cook in a copper vat, stirring constantly to avoid burning. When half done, add calamansi and continue cooking until it reaches a temperature of 950° C.; or when it no longer sticks to the finger when touched. Place on a greased board. Form a mass 12 cm. long, and 4 cm. thick. Set aside to cool. Cut with a very sharp knife crosswise to produce bars of about 12 cm. long, 4 cm. wide, and 1-1/2 cm. thick.

Wrap each bar in a piece of wax paper and keep in well covered boxes.

HOLIDAY COCONUT BALLS

4 cups coconut, chopped finely
2 cups sugar
8 tablespoons glucose
8 tablespoons calamansi, chopped finely (Chopped nangka, pineapple, and lime peel may be substituted for calamansi.)

Cook coconut, sugar, and glucose in a copper vat, stirring constantly while cooking. When half done; add calamansi or its substitute, and continue cooking until it reaches a temperature of 90° C. Cool and form to small balls. Wrap in wax paper.

COCONUT BRITTLE

1 cup grated coconut, toasted
1 cup sugar

Melt sugar in a copper vat over a moderate fire. Stir constantly. Add COCONUT and mix. Pour on a greased board and roll to a thin sheet. Cut to desired pieces. Wrap in wax paper.

COCONUT HONEY

1 cup pure coconut milk
⅔ cup brown sugar
1 cup glucose

Mix COCONUT milk, sugar and glucose. Cook in a copper vat (tacho) over a slow fire. Stir constantly while cooking and cook until it reaches a temperature of 105° C., or when it falls in a mass when dropped from a spoon. Fill in sterilized jar or can while boiling hot and seal hermetically.

PURE COCONUT COOKIES

1 cup grated coconut
½ cup shortening
1 egg, slightly beaten
⅓ tablespoon baking powder
1 teaspoon vanilla
½ cup sugar
1 cup flour (cassava)

Cream shortening and sugar. Add egg, COCONUT, and mix well. Add flour sifted with baking powder; beat well. Add vanilla and mix. Drop by teaspoonfuls on greased cookie sheets. Bake in moderate oven until brown.

COCONUT WAFERS

¼ cup grated coconut, toasted
⅛ cup coconut milk
1½ cups cassava flour
⅛ cup shortening
½ teaspoon vanilla
⅛ cup sugar

Cream shortening and sugar. Add flour gradually, alternating with COCONUT milk. Add vanilla and mix. Line greased baking pan with paper and spread on it a thin layer of the mixture. Sprinkle over it toasted COCONUT and bake in moderate oven until brown.

SPECIAL COCONUT "LECHA FLAN" (CUSTARD)

2 cups thick coconut milk
6 eggs yolks
4 eggs whites
1 cup sugar, refined
1 tablespoon lime rind, grated
1 cup brown sugar

Dissolve brown sugar in 1/4 cup water and cook over a moderate fire until the sugar browns, or caramelizes. Line a suitable mold with 3/4 of the hot caramelized syrup evenly, and set aside. Stir the coconut milk into the remaining ¼ of the caramelized syrup. Place over a low fire and stir continuously until all caramel is dissolved. Set aside.

Mix egg yolks, and slightly beaten whites and beat lightly to mix thoroughly. Add sugar and lemon rind. Then add coconut milk with carmelized syrup and mix well. Strain through a cheese cloth and pour in the mold previously lined with caramel. Cook slowly in a pan with hot water without allowing water to boil. After about 1-1/2 hours cooking, place a piece of plain metal sheet over the mold with a few pieces of live charcoal to brown top. Cool and unmold before serving.

COCONUT CAKE

1 cup coconut milk
2 cups sugar
4 egg yolks
4 egg whites
3½ cup flour
4 teaspoons, baking powder

Beat egg yolks and add coconut oil, beating until smooth. Add sugar and continue beating until creamy. Add 2 egg yolks and beat again until fluffy. Add flour (previously sifted 3 times with baking powder) alternately with coconut milk in small amounts at a time. Lastly fold in egg whites stiffly beaten. Bake in moderate Palayok Oven 10 minutes.

MATAMIS NA BAO

Milk of 3 ordinary sized cocbnuts
3 cups refined sugar (315 grams)
1 cup glucose (333 grams)

Mix coconut milk, sugar, and glucose and heat in a tacho (Copper vat). When all sugar is dissolved, remove from fire and strain through cheese cloth to remove foreign bodies. Wash tacho. Pour in the strained mixture, and continue cooking until the mixture reaches a temperature of 105 degrees C. Pour hot in sterilized can and seal.

COCONUT POLVORON

1 cup coconut flour, toasted
4 tablespoons sugar
6 tablespoons sugar
6 drops vanilla
⅛ teaspoon salt
2 tablespoons butter

Mix all ingredients thoroughly. Roll to a thin sheet and with the aid of a biscuit cutter, cut to pieces. Wrap in wax paper and store in well sealed containers.

SOMETHING OUT OF NOTHING

By Maria Y. Orosa

Of what use was coconut sapal before? I mean, grated coconut after extracting the milk from it. Well, for one thing we fed it to the pigs. Then, some very resourceful housewife would polish her bamboo floors with it. Most of the time we threw it away. Coconut sapal is still just coconut sapal. Only today we may bake delicious cakes and cookies from it because we can turn it into flour by a very simple home method.

We had many uses for coconut oil, but whoever thought of using it as shortening in place of butter or margarine and as salad oil? The Plant Utilization Division made attempts and found it as reliable and good and, definitely, more economical. Wonderful emergency stand-bys, aren't they?

HOW TO MAKE COCO-OIL

Grate coconut finely. Squeeze the milk, using hand pressure. Add small amounts of hot water; work with hand to extract as much milk as possible, and squeeze out milk. Repeat this operation twice.

For every 3 cups of grated coconut use about 1 cup of hot water. (Use 1/2 cup of hot water per operation, or 1 cup for the two operations). Combine all extract (milk) and cook over a slow fire. When the oil begins to appear, add to the formula 1 pandan leaf, or about 1 teaspoon of grated lime peel or lemon peel and continue cooking until all oil is extracted.

From many experiments made, the following results have been obtained:

One regular sized coconut yields about 3 cups of grated meat, and about 1/3 cup of coconut oil. The oil made by the above process is very pleasant and may satisfactorily be used as a shortening and as salad oil. Cakes and cookies were made with this oil and proved to be very palatable. They cannot be distinguished from cakes made with butter. Mayonnaise made with this oil was found to be as tasty.

HOW TO MAKE COCO-MEAL

After extracting the milk from the grated coconut, the residue or sapal may be washed with hot water, dried in the sun or in a slow oven, ground to flour-consistency and there you have coco-meal or coconut flour.

COCONUT "SAPAL" CAKE WITH COCONUT OIL

¾ cup coconut-sapal flour
¼ cup cassava flour
⅓ cup coconut oil
4 eggs
2⅓ teaspoons baking powder
1 teaspoon vanilla
½ cup coconut milk
Pinch of salt
1 cup sugar

Beat egg yolks and add oil gradually, beating continuously. Add sugar and mix well.

Sift coconut flour, cassava flour, baking powder, and salt three times. Add to first mixture alternately with milk. Add vanilla. Fold in stiffly beaten egg whites. Pour in greased cake pan and bake in moderate palayok-oven 20 minutes.

COCONUT MAJA BLANCA

1 cup cocomeal
1 cup corn flour
4 cups coconut milk
Anis and latik to garnish
1 cup sugar

Mix cocomeal and corn flour. Add coconut milk. Stir well, and cook in an open vessel, stirring while cooking. When half done, add sugar and cook until well done.

COCONUT CREAM

Extract cream of coconut without adding water and use 1 tablespoon of this for every cup of coffee.

COCONUT BUTTER

Grate coconut finely and press out cream. Add 1 cup hot water to the residue and work with hands. Extract milk and add to cream. Repeat this operation at least twice. Place milk in a receptable and let stand at least an hour. Skim top for cream. Place in a jar with a small piece of ice. Cover jar tightly and shake vigorously until all fat gathers in one mass. Take out from jar and work with fork in a wooden bowl to remove moisture. Add a small amount of refined salt and mix well. Place in a container and cover. Keep in a refrigerator to keep solid. If desired, a small amount of more solid fat such as purico, may be added.

Coloring may be added to make it more attractive. Achuete makes a satisfactory coloring agent.

Coloring may be added to make it more attractive. Achuete makes a satisfactory coloring agent.

Chapter IV

SOY BEANS AS A COMPONENT OF A BALANCED DIET AND HOW TO PREPARE THEM

By Maria Y. Orosa
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WITH THE ASSISTANCE OF THE MEMBERS OF THE DIVISION

INTRODUCTION

The soy bean is also known as soya bean or soja bean. In botany it was referred to as Glycine hispida, but now the botanical name of the plant has become Glucine max, under the international rules of botanical nomenclature. It has been known in China and Japan for several thousand years. Adolph and Kiang[1] state that the use of the soy bean in China dates back to the beginning of China's agricultural age under the emperor Shen Nung and that it is mentioned in the Ben Tsao Yang Mu written by Shen Nung in the year 2838 B.C.

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[1] The Nutritive Value of Soy-bean Products, Nat. Med. Journ. 5 (1919)

The soy bean is a native of eastern Asia. When and by whom the soy bean was first introduced into the Philippines, no one can ascertain. The Filipino people have long known some important soy-bean preparations, such as soy sauce, or "toyo", bean curd, or "tokua," fermented bean curd, or "tahuri," not knowing that they were prepared from this bean. The seed is known in some parts of the Philippines, where it is grown, as "utao."

Since 1880 the soy bean has been a farm crop in the United States but during the early years of its introduction it was utilized only as a forage crop. Later the value and uses of the oil became known both in America and Europe. Due to the scarcity of cottonseed and linseed oil, coupled with proof that the soy bean is easy to grow, easy to harvest, easy to handle and is not as easily attacked by insects as other seeds, America and Europe began to devote more attention to the growing of the soy bean for its oil. The meal is used as animal food and as fertilizer. The oil is now used in the manufacture of soap, paint, candles, artificial rubber, linoleum, water-proofing, liquids, enamels and waterproof goods, such as cloth, umbrellas and lanterns, lacquer for varnish and printing ink, and in the manufacture of certain foodstuffs, as salad oil and butter substitutes. Baked soy beans, pork and bean style; soy-bean flour; and soy-bean meal are now being put on the market by American and European industries.

The soybean for several thousands of years has been utilized by the Chinese and Japanese as food. Some of the soybean preparations are consumed in these countries three times a day. The Chinese people do not use dairy products and most of them consume only a small amount of meat. Despite these facts, the Chinese people have lived for centuries on what appears to be a well-balanced diet through the use of the soy bean.

The main object of this pamphlet is to encourage the Filipino people to use more soy beans, and preparations made from them, as food. It is an accepted belief that Filipinos do not eat a well-balanced diet. One reason for this is the limited earning capacity of many of us, which prohibits the purchase of foods that have the necessary proteins and fats, such as meat, eggs, milk, etc. Rice, which is mostly starch, and on which many of us depend for our living, cannot supply our bodies with the proteins and fats necessary for health. Protein must be obtained by the body for the building of tissues, and the rebuilding of the wear and tear of fatigue. People who cannot well afford to eat expensive protein use liberally soy beans in their diet. Experiments by different food experts indicate that 20 per cent soy beans and 80 per cent rice make a well-balanced diet as far as protein and fat are concerned.

In considering the food value of the soy bean, Daniels and Nichols,[2] and Osbourne and Mendel[3] found that it averages a high percentage of physiologically useful protein, a considerable amount of energy-yielding fat and carbohydrate, and sufficient fat-soluble vitamin A and water-soluble vitamin B. In addition to the fact that the soy bean is rich in protein, this protein, unlike that of all other vegetables, is similar to animal protein or to the protein of the human body. The different kinds of protein contain a number of different amino acids. Generally, plant proteins seems to lack some of the active amino acids, and the soy bean is an exception. McCollum says, "Its proteins which are adequate when fed at a plane corresponding to 17 per cent or more of the diet, can support growth when they form the sole protein supply." Horvath says, "The soy bean protein is a complete protein containing all the essential amino-acids necessary for the building up of the protein of the human organs."

Science has found that besides carbohydrates, fats proteins, and minerals, the body needs substances called vitamins. Bureau of Science tests have shown that polished rice, which most of us eat, is deficient in vitamin B. McCollum found it deficient in vitamin A. Horvath found the soy bean to contain vitamins B and B_2 also called F and G. Other investigators found vitamins A, D, E, and C.

While the addition of soy beans to rice would add vitamins to the diet and considerably improve its quality, particularly in reference to the deficiency of vitamins A and B, it would probably be better not to depend entirely on soy beans and rice for vitamins, but to add fruits and vegetables, particularly leafy vegetables. However, the addition of soy beans would probably improve the vitamin content of the diet of most of the poorer classes and make it possible for them to secure such additional vitamins at a nominal cost.

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[2] Journ. Biol. Chem. 32 (1917) 91

[3] Proc. Soc. Exp. Med. 14 (1917) 174; Journ. Biol. Chem. 32 (1917) 369.

Soy-bean flour is now being prepared by several factories in Europe and America and is especially valuable for diabetic patients, as it contains only a very small percentage of starch.

Soy-bean milk is used in China much as cow's milk is used in the United States. Preparations requiring milk can be successfully made by using soy-bean milk instead of canned milk or fresh cow's or carabao's milk. In the Philippines the use of soy-bean milk will be very beneficial, because of scarcity and the high cost of milk.

In considering a suitable diet for the poorer classes, the question of price must always be of paramount importance. If beans were grown or imported in larger quantities they would probably be cheaper than they are at present, and substituting part of the rice in the diet by soy beans would not increase the price of the diet.

Soy beans are grown in some parts of the Philippines. According to Doctor Roxas, Director of the Bureau of Plant Industry, 2,481 tons were grown in Batangas in 1921 and 4,218 tons, in 1930. However, the importation of soy beans in 1924 was 4,657 tons. Doctor Roxas states that soy beans can be grown in all parts of the Philippines. In campaigning to teach the public the proper methods of cooking soy beans will result in this article of diet being widely and liberally used by the Filipino people as a means of improving health and lessening disease. Let us keep in mind the saying "An ounce of prevention is worth a pound of cure."

In order to give the reader an idea of the food value of the soy bean, Table I shows the composition of soy beans and of some of the most nourishing common foods.

Table I — COMPARISON OF THE FOOD VALUES OF SOY BEAN AND OTHER COMMON FOODS *

Name of food.	Protein.	Fat.	Carbohydrates.	Ash.	Water.	Calories per pound.
	Per cent	Per cent	Per cent	Per cent	Per cent	
Soy bean	34.00-40	16.8-20	33.7	4.7	10.8	1,970
Mung bean (mongo)	23.8	2.0	59.0	3.8	11.4	——
Rice	8.0	2.0	77.0	1.0	12.0	1,720
Corn	10.0	4.3	73.4	1.5	10.8	1,800
Navy bean (habicuelas)	22.5	1.8	59.6	3.5	12.6	1,605
Peas	24.6	1.0	62.0	2.9	9.5	1,655
Lima bean (patani)	18.1	1.5	65.9	4.1	10.4	1,625
Wheat	12.2	1.7	73.7	1.8	10.6	1,750
Eggs	14.8	10.5	——	1.0	73.7	720
Beefsteak	18.6	18.5	——	1.0	61.9	1,130
Porkchops	16.9	30.1	——	1.0	52.0	1,580
Peanuts	25.8	38.6	24.4	2.0	9.2	2,560

COOKING OF SOY BEANS

Immature soy beans may be cooked in the same way as lima beans (patani). The matured beans are hard and like many beans of similar texture they require thorough soaking (about 3 hours). We have found that soaking longer than five hours often results in a longer cooking period being necessary to soften the beans. If, after soaking, the beans are merely placed in water and boiled, it will take some time to cook the beans thoroughly soft. However, if the soaked beans are ground fine they can be cooked in a short time. Ground beans can be mixed with rice in any desired proportion and cooked with the rice or added to soups or stews.

The time necessary to soften whole beans can be reduced somewhat by adding table salt to the water they are cooked in. The most convenient method of cooking would be, of course, to use a pressure cooker, but since this is not usually found in the ordinary home, we devised the following substitute method which is simple, cheap, and very satisfactory.

Wash the soy beans thoroughly with water.

Soak from 3 to 5 hours.

Place in water containing a small amount of salt (⅔ tablespoonful salt to 1 quart of water) and bring to a boil. While boiling transfer to a mason jar and half seal the jar.

Place the jar in a pan containing a boiling saturated solution of salt. The pan should be provided with a rack to prevent contact of the jar with the pan. Boil for 3 hours or more.

SOY BEANS BOILED WITH RICE, I

⅓ cupful soy beans
(soaked 3 hours)
⅔ cupful rice
1 cupful water

Pass the soaked soy beans through a meat grinder and add this to the rice previously washed with water. Add 1 cupful of water and a few pinches of salt and boil slowly in a covered pan until the water has dried out.

SOY BEANS BOILED WITH RICE, II

⅓ cupful soaked soy beans
(not ground)
2 cupfuls water
A few pinches of salt
⅔ cupful rice

Boil the soy beans, water, and salt together in a covered pan until the water has all dried out.

SOY BEANS BOILED WITH RICE, III

½ cupful soaked soy beans
(ground)
½ cupful rice
A few pinches of salt
1 cupful water

Proceed as in Recipe No. 1

SOY BEANS BOILED WITH RICE, IV

½ cupful soaked soy beans
(not ground)
½ cupful rice
2 cupfuls water
A few pinches of salt

Proceed as in Recipe No. II

ROASTED SOY BEANS

Roast the soy beans with a small quantity of lard and when well brown and crisp sprinkle over them a small quantity of salt.

SOY-BEAN BRITTLE

⅔ cupful roasted soy beans
A few drops of vanilla extract
1 cupful sugar

Melt the sugar in a pan with the aid of a low fire. Increase the heat until the sugar boils. Add the roasted soy beans and mix well. Pour on a buttered board and press the mass with a rolling pin to a thickness of ¼ inch. Cut with a knife in desired pieces. Lard may be used in place of butter.

SOY-BEAN SOUP NO. I

1 cupful boiled soy beans
3 cupfuls water
¼ teaspoonful pepper
1 teaspoonful salt
1 tablespoon kinchay, cut in small pieces (native celery)

Pass the boiled soy beans through a sieve. Add the water, salt, and pepper, and boil until the soup is somewhat thick. Add the kinchay leaves and boil 2 minutes.

SOY-BEAN SOUP NO. II

1 cupful boiled soybeans
3 cupfuls water
5 pinches pepper
⅓ teaspoonful salt
3 tablespoonfuls tomato paste

Mash the soy beans and pass through a sieve. Add the water and boil 15 minutes in a closed pan. Add the tomato paste, salt, and pepper, and boil until the soup thickens.

SOY-BEAN SOUP NO. III

1 cupful boiled soy beans
⅓ teaspoonful salt
5 pinches pepper
3 cupfuls water
A small piece of ham or bacon
A few kinchay leaves

Mash the soy beans and pass through a sieve. Add the water, salt, pepper, ham, and boil until the soup thickens. Remove the ham and drop in a few leaves of kinchay (native celery) and boil 1 minute.

SOY-BEAN SOUP NO. IV

1 cupful boiled soy beans
3 cupfuls water
1 teaspoonful sugar
5 tablespoonfuls coconut cream
½ teaspoonful salt

Mash the soy beans and pass through a sieve. Add the salt, sugar, and water, and boil until the soup thickens. Take the pan off the fire and add the coconut cream to the soup just before serving.

SOY-BEAN SOUP NO. V

1 cupful boiled soy beans
3 cupfuls water
3 tablespoonfuls finely chopped red sweet pepper
1¼ teaspoonfuls salt
1 teaspoonful chopped onion
A few pinches of pepper

Mash the soy beans and pass through a sieve. Add the salt, pepper, water, and boil until the soup thickens. Then add the finely chopped sweet pepper, chopped onions, and boil 5 minutes longer.

SOY-BEAN SOUP NO. VI

½ cupful boiled soy beans
2 cupfuls soy-bean milk
½ tablespoonful flour
1 tablespoonful butter
⅛ teaspoonful pepper
⅔ teaspoonful salt

Make a sauce from the butter, flour, and soy-bean milk by browning the flour in the butter, adding to it the salt, pepper, and milk. Stir constantly while the milk is being added to prevent lumping. Cook the mixture about 5 minutes. Mash the boiled soy beans and pass through a sieve. Add this to the soup and cook until the soup thickens.

SOY-BEAN SOUP NO. VII

1 cupful boiled soy beans
2 cupfuls milk, or coconut milk
3 tablespoonfuls butter
1 onion, finely chopped
1 teaspoonful chopped kinchay (native celery)
1 teaspoonful salt
¼ teaspoonful pepper
1 cupful water

Melt the butter and fry the onion and kinchay. Add the soy beans, pepper, salt, and water, and boil 15 minutes in a covered pan. Mash and pass through a sieve. Add the coconut milk and boil again until the soup thickens.

SOY-BEAN SOUP NO. VIII

1 cupful soy-bean milk
3 tablespoonfuls boiled soy beans
2 tablespoonfuls chopped shrimps
1 tablespoonful tikitiki flour (darak)
1 tablespoonful lard
¼ onion
2 sections garlic
½ teaspoonful salt
2 pinches ground pepper

Pound together in a mortar the boiled soy beans, shrimps, ½ of a medium-sized onion, and one section of garlic. Season with ¼ teaspoonful of salt and pinch of pepper. Stir the tikitiki flour into the mixture and form it into small balls. Fry the balls in hot fat until brown.

Make the shrimp soup from the head and shell of the shrimps, by pounding them in a mortar, adding to them about ½ cupful of water, boiling it slowly about 5 minutes and straining it through a sieve.

Saute' in the lard the remaining garlic ½ of an onion, both chopped very fine, and when brown add the shrimp soup. Boil a few minutes and add the soy-bean milk. Season with the rest of the salt (¼ teaspoonful) and pepper (a pinch) and boil 5 minutes longer.

Drop the balls in the soup just before serving.

SOY-BEAN SOUP NO. IX

⅓ cupful boiled soy beans
¼ cupful fresh leaves of pepper (capsicum)
¾ cupful rice washings (rice water)
1 tablespoonful fish sauce (patis)
2 tablespoonfuls lard
2 sections garlic, chopped fine
2 tablespoonfuls chopped onion
1 tablespoonful ginger, cut in small pieces

Fry the garlic, ginger, and onion in lard until brown. Add the patis and cook 1 minute. Then add the rice washings and boil for 4 minutes. Lastly add the boiled soy beans and the fresh leaves of pepper and continue boiling 5 minutes longer.

SOY-BEAN-ALUGBATI-LEAVES SOUP NO. X

½ cupful boiled soy beans
1 cupful young leaves of alugbati
2 tablespoonfuls chopped pork
½ onion, chopped
2 sections garlic, chopped
2 tablespoonfuls lard
1 teaspoonful salt
2 cups coconut milk
1 cupful shrimp soup

Fry the garlic, onion, and pork in lard. Pour the shrimp soup in the same pan and let boil. While boiling add the coconut milk, soy beans, salt, and the alugbati leaves. Boil for 2 minutes.

SOY-BEAN SOUP WITH DUMPLINGS NO. XI

1 cupful boiled soy beans
2 tablespoonfuls butter
¼ teaspoonful salt
A few pinches of pepper
2 cupfuls water

Mix the above and boil 5 minutes.

Mix the following:

¼ cupful soy-bean milk
⅓ teaspoonful butter
2½ tablespoonfuls flour
1 egg
⅛ teaspoonful salt

Boil the milk, butter, and salt, and while hot, add the flour at once. Take the pan from the fire and stir very rapidly to avoid lumping. Put the pan back on the fire and cook the dough a few minutes longer. When the dough is thoroughly cooked cool it about 1 minute. Mix with it 1 whole egg and drop the dumplings by ½ teaspoonfuls in the boiling soup. Cook the dumplings in the boiling soup 2 minutes.

SOY-BEANS WITH BAGOONG

1 cupful boiled soy beans
1 tablespoonful bagoong (salted, fermented fish)
1 section garlic
2 tablespoonfuls vinegar
2 tablespoonfuls lard
½ onion, cut fine

Saute' the garlic and onion in lard. Add the bagoong to the vinegar and add this mixture to the pan containing the garlic and onion. Boil, without stirring, 2 minutes. Add the soy beans and continue the cooking for 2 minutes.

SOY-BEANS WITH ALAMANG

¾ cupful boiled soy beans
¼ of an onion, chopped
1 section garlic
1 tablespoonful lard
1 tablespoonful alamang (salted, fermented shrimp)

Saute' garlic and onion in lard. Add the alamang and soy beans, and cook in a covered pan for 2 minutes.

SOY-BEANS PINAKBET

½ cupful boiled soy beans
2 medium-sized tomatoes, sliced fine
1 cake tokua, sliced
1 eggplant, sliced to small pieces
A small piece of pork cut in small pieces
1 tablespoonful bagoong
1 cupful rice water
½ ampalaya, sliced thin, crosswise

Cook the tomatoes, bagoong, and pork, then add the soy beans, tokua, and rice water, and boil 3 minutes. Add the vegetables and cook until are tender.

SOY-BEANS WITH VEGETABLES

1 cupful boiled soy beans
1 tokua cake, sliced
4 tablespoonfuls sliced patola
6 tablespoonfuls sliced upo
½ eggplant, sliced
6 tablespoonfuls cabbage, sliced
2 tablespoonfuls garlic, chopped
4 tablespoonfuls onion, sliced
4 tablespoonfuls pork, sliced to small pieces
2 tablespoonfuls shrimp, sliced into small pieces
6 teaspoonfuls toyo
½ cupful shrimp soup
2 tablespoonfuls lard

Fry the garlic in lard until brown. Add the onion and fry again. Add the pork, tokua, and shrimp, and continue cooking 3 minutes. Then add the soy beans, and the vegetables and continue cooking for several minutes. Finally add the shrimp soup and toyo sauce and boil 5 minutes.

TOKUA WITH KINCHAY

3 tokua cakes cut to small cubes
½ cupful kinchay stems cut to ½ inch long
1 teaspoonful salt
A small piece of pork cut in small pieces
1 section garlic, chopped fine
¼ onion, cut fine
3 tablespoonfuls lard

Fry the garlic, onion, and pork in lard. Add the tokua and salt, and cook 3 minutes longer. Then add the kinchay and cook 1 minute more.

SOY BEANS WITH KANGKONG

¾ cupful boiled soy beans
2 cupfuls kangkong leaves and stems, cut to small pieces
¾ tablespoonful alamang
½ cupful rice water
1 tablespoonful coconut oil
2 sections garlic, chopped

Fry the garlic in oil. Add the soy beans and alamang, and cook, stirring constantly. Then add the kangkong leaves and stalks, and water. Cover the pan and boil 10 minutes, or until the kangkong is tender.

SOY BEANS WITH SQUASH

¾ cupful boiled soy beans
1 cupful sliced squash
1 tablespoonful lard
½ cupful water
½ teaspoonful salt
⅛ teaspoonful pepper
1 section garlic, chopped

Fry the garlic in lard until brown. Add the squash, water, salt, and pepper and cook covered. When the squash is tender, add the boiled soy beans and boil 5 minutes.

SOY BEANS WITH SQUASH AND SOY SAUCE

½ cupful boiled soy beans
½ cupful sliced squash
1 onion, cut fine
2 tablespoonfuls toyo
½ cupful water
2 tablespoonfuls lard
3 sections garlic, chopped

Saute in lard the garlic, onion, soy beans, and squash. Add the toyo and water, and boil until the squash softens, and the soup thickens.

SOY BEANS WITH SQUASH LEAVES

1 cupful boiled soy beans
1 cupful sliced leaves of squash
2 sections garlic
½ onion, sliced
1 cupful rice water
2 tablespoonfuls coconut oil
2 tablespoonfuls alamang (fermented, salted shrimp)

Saute the garlic, onion, and alamang, in oil. Add the soy beans and the squash leaves (use only young tender leaves) and continue cooking 5 minutes. Finally add the rice water and let the mixture boil from 10 to 15 minutes.

SOY BEANS WITH MALUNGAY LEAVES

½ cupful boiled soy beans
1 cupful malungay leaves
1 tablespoonful bagoong
1 cupful water
1 section garlic
1 tablespoonful lard

Brown the garlic in lard and add bagoong; fry 1 minute. Add the water and soy beans and boil 5 minutes. Lastly add the malungay leaves and boil for 2 minutes.

SOY BEANS WITH AMPALAYA LEAVES

¾ cupful boiled soy beans
1 cupful of ampalaya leaves
1 tablespoonful lard
2 sections garlic, chopped
1 tablespoonful tomato sauce
½ cupful water
Salt to taste
A few pinches of pepper
½ onion, chopped fine

Select the young leaves of the ampalaya and soak in water. Fry the garlic, onion, and tomato sauce in lard. Add the water, salt, pepper, and soy beans, and cook 5 minutes. Then add the ampalaya leaves and cook 3 minutes longer.

SOY BEANS WITH HEART OF BANANA (Banana Flower)

¾ cupful boiled soy beans
2 cupful heart of banana, sliced to very fine, long pieces
¾ tablespoonful alamang
¼ onion, sliced thin
½ cupful rice water
2 sections garlic
1 tablespoonful lard

Saute the garlic and onion in lard. Add the heart of banana previously worked with coarse salt and pressed, and fry 5 minutes more. Then add the alamang, soy beans, and rice water, and cook 5 minutes.

SOY BEANS WITH BANANA FLOWER AND COCONUT MILK

1 cupful boiled soy beans
1 cupful coconut milk
1 cupful finely sliced banana flower
A small piece of ginger
2 tablespoonfuls bagoong (salted, fermented fish)
¼ cupful coconut cream
4 sections garlic

Boil the coconut milk, with bagoong, garlic, and ginger. Work the banana flower with coarse salt and wash the salt out with cold water. Add this, together with the soy beans, to the boiling coconut milk and continue cooking until the soup is practically dried out. Then add ¼ cupful coconut cream and let the mixture boil not longer than 3 minutes.

SOY BEANS WITH PATOLA

½ cupful boiled soy beans
1 cupful sliced patola
¼ cupful pork, sliced
¼ cupful sliced shrimp
1 cupful shrimp soup
2 tablespoonfuls chopped onion
1 tablespoonful chopped garlic
1 tablespoonful toyo
2 tablespoonfuls lard
2 tablespoonfuls chopped tomatoes

Saute' the garlic, onion, and tomatoes in lard. Add the shrimp, pork, and toyo sauce, and cook 3 minutes. Add the shrimp soup and heat to boiling. Then add the patola and soy beans and cook until the vegetable is tender.

SOY BEANS WITH POTATO AND COCONUT MILK

¾ cupful boiled soy beans
½ cupful coconut milk
1 small sweet potato, boiled and cut into small cubes
1 tablespoon lard
2 sections garlic, chopped fine
½ teaspoonful salt
½ teaspoonful sugar

Fry the garlic in lard. Add the soy beans, sweet potato, salt sugar, and the coconut milk, and boil 5 minutes.

SOY BEANS WITH LETTUCE

1 cupful boiled soy beans
1 head of native lettuce
¼ cupful milk
1 egg yolk
1 tablespoonful butter
½ teaspoonful sugar
¼ cupful water
½ teaspoonful salt

Wash the lettuce well, put in a stewpan with the boiled soy beans, butter, water, and salt, and cook about 5 minutes Remove the lettuce, and spread the leaves on a plate.

Mix the milk and the egg yolk, and add this to the contents of the stewpan. Add the sugar, and cook slowly for 5 minutes, stirring constantly. Pour over the plate on which the lettuce leaves are spread.

SOY BEANS WITH GREEN ONION LEAVES

¾ cupful boiled soy beans
2 tablespoonfuls chopped green onion
2 tablespoonfuls sliced pork
1 tablespoonful chopped shrimp
1 section garlic, chopped fine
2 tablespoonfuls chopped onion
1 tablespoonful lard
½ cupful shrimp soup
Salt and pepper to taste

Fry the garlic, onion, pork, and shrimp in lard. Add the soy beans, salt, and pepper and continue cooking a few minnutes. Then add the green onion and the shrimp soup remains.

SOY-BEAN GUINATAAN

¾ cupful boiled soy beans
6 ripe guavas, peeled and sliced
1 medium-sized sweet potato boiled and sliced into small cubes
1 cupful coconut milk
¼ cupful coconut cream
½ cupful sugar
1 pinch salt

Place the sliced guavas and soy beans in a pan. Add the coconut milk, and boil a few minutes. Then add the sweet potato and continue boiling 5 minutes. Add the sugar, salt, and the coconut cream, and boil ½ minute.

SOY-BEAN KILAWIN

¼ cupful chopped soy beans
¼ cupful sliced pork
1 small raddish, sliced fine
2 sections garlic, chopped
3 tablespoonfuls vinegar
1 teaspoonful salt
¼ cupful water
A pinch of ground pepper
2 tablespoonfuls lard

Saute the garlic, sliced pork, raddish, and soy beans in lard. Add 3 tablespoonfuls vinegar, salt, pepper, and water, and boil until the raddish is tender but not soft.

SOY BEANS WITH PIG'S BLOOD (DINUGUAN)

½ cupful boiled soy beans
1½ tablespoonfuls vinegar
4 tablespoonfuls pig's blood
¼ cupful chopped pork
2 tablespoonfuls chopped onion
½ cupful water
¼ teaspoonful chopped garlic
1 tablespoonful lard
1 tablespoon sugar
¼ teaspoonful pepper
1¼ teaspoonfuls salt
2 tablespoonfuls chopped tomatoes

Soak the pork in 1 tablespoonful vinegar and 1 teaspoonful salt.

Saute the garlic, onion, and tomatoes in lard. Add the pork and soy beans and fry 3 minutes longer. Add the water, sugar, pepper,1 teaspoonful vinegar, ¼ teaspoonful salt, and the blood, previously stirred with a fork. Cook slowly for five minutes without stirring.

TOKUA TOCHO WITH SOY BEANS

- 1½ cakes tokua, sliced into thin pieces, ½ inch long
- ½ cupful boiled soy beans
- 4 tablespoonfuls sliced pork
- 2 tablespoonfuls ginger cut in thin slices, ½ inch long
- ½ onion, sliced
- 4 tablespoonfuls chopped tomatoes
- 2 tablespoonfuls soy sauce
- 2 tablespoonfuls vinegar
- 1 tablespoonful tahuri
- ½ cupful water
- 3 tablespoonfuls lard
- 4 sections garlic, chopped

Fry the tokua, onion, and pork separately, in lard. Set them aside. Saute the garlic, ginger, and tomatoes in lard. Add the soy sauce, tahuri, boiled soy beans, the fried tokua, pork, and onion, and ½ cupful water. Boil for 5 minutes. Then add the vinegar and continue cooking, without stirring, for 5 minutes.

TOKUA WITH LIVER

- 1½ cakes sliced tokua
- ¼ cupful sliced liver
- 2½ tablespoonfuls vinegar
- 2 tomatoes, sliced fine
- ⅛ teaspoonful pepper
- 1½ teaspoonfuls salt
- 1 green pepper, sliced fine
- ½ onion, sliced thin, lengthwise
- 1 tablespoonful lard

Soak the liver in 1½ tablespoonfuls vinegar with the salt and pepper. Fry the onion, tomatoes, liver, and green pepper in lard. Add 1 tablespoonful vinegar, a few pinches each of a salt and pepper and the sliced tokua. Let simmer until liver is tender.

SWEET PEPPER STUFFED WITH SOY BEANS

- 1 cupful boiled soy beans
- 3 sweet peppers
- ½ cupful ground pork
- ½ cupful sliced shrimps
- 3 tablespoonfuls soy sauce
- 3 tablespoonfuls chopped onion
- 2 tomatoes, chopped fine
- 1 egg
- 2 tablespoonfuls lard
- 1 tablespoonful chopped garlic
- 1 tablespoonful tikitiki flour
- A few pinches of ground pepper

Saute the garlic, onion, and tomatoes in lard. Add the shrimps and pork and fry for five minutes. Then add the soy beans, toyo sauce, and the ground pepper.

Roast the sweet pepper on charcoal, dip immediately in cold water, and peel. Remove seeds. Stuff the pepper with the above mixture. Roll in lightly beaten eggs mixed with tikitiki flour and fry in hot fat until brown.

EGGPLANT STUFFED WITH SOY BEANS

1 cupful boiled soy beans
¼ cupful ground pork
3 tablespoonfuls toyo
½ cupful shrimps, sliced fine
3 tablespoonfuls chopped onion
3 eggplants
1 egg
1 tablespoonful chopped garlic
A few pinches of pepper
1 tablespoonful rice bran

Saute the garlic, onion, and tomatoes in lard. Then add the shrimp, pork, soy sauce, and pepper, and fry three minutes. Add the chopped soy beans and mix thoroughly.

Roast the eggplants over charcoal, dip in cold water, and peel. Remove the seeds. Stuff them with the above stuffing. Roll in lightly beaten egg previously beaten with the rice bran, and fry in hot fat until brown.

STUFFED TOKUA NO. 1

2 cakes tokua
1 tablespoonful chopped onion
2 tablespoonfuls chopped tomatoes
2 sections chopped garlic
6 tablespoonfuls chopped fat pork
3 tablespoonfuls lean pork
¼ teaspoonful salt
1 tablespoonful lard

Divide tokua cake into 4 equal parts. Slice each part to 4 thin slices and soak these in vinegar a few minutes before using.

Saute the garlic, onion, and tomato, in lard. Add the lean pork and then the pork fat and salt, and fry 2 minutes.

Make sandwiches, using the slices of tokua in place of bread and the mixture as filler.

Wrap in omentum (unto sin sal) and fry in hot, deep fat until brown.

If omentum is not available, use lumpia wrapping instead.

Divide tokua cake into 4 equal parts and slice each part very thin.

Make sandwiches using tokua slices in place of bread, and using the following filler:

2 tablespoonfuls green onions, chopped
1 egg
2 tablespoonfuls bread crumbs
2 tablespoonfuls chopped shrimp
5 tablespoonfuls lean pork
2½ teaspoonfuls or more of toyo sauce
2 pinches of pepper
2 pinches sugar
10 tablespoonfuls fat (pork)

Mix.

Fill the tokua slices and wrap each with omentum (unto sin sal) or lumpia wrapping.

Steam 15 minutes. Fry in deep hot fat.

SOY BEANS A LA VALENCIANA

- ½ cupful boiled soy beans
- 1 sweet pepper, sliced in long, narrow strips
- 3 ripe tomatoes, chopped fine
- 2 sections garlic, chopped
- 1½ cupfuls boiled rice
- ½ onion, finely chopped
- 2 tablespoonfuls lard
- ½ teaspoonful salt
- 2 pinches pepper

Saute the garlic, onion, and tomatoes in lard. Add the sweet pepper, soy beans, salt, pepper, and boiled rice. Fry about 5 minutes. Sprinkle some pimiento over it for coloring.

SOY BEANS WITH BANANA

- ½ cupful soy beans
- ¾ cupful saba banana, fried and sliced into small pieces
- 1 egg
- ¼ cupful chopped pork
- 2 tablespoonfuls chopped onion
- 1 teaspoonful salt
- ½ teaspoonful sugar

Mix the above ingredients and fill into the cups of a small muffin pan. Cook covered in boiling water about 25 minutes. Place in a hot oven to brown the top before serving.

SOY BEANS WITH TOYO

- 1 cupful boiled soy beans
- 2 tablespoonfuls soy sauce
- 1 medium-sized onion, chopped fine
- 1 section garlic, chopped very fine
- 1 teaspoonful calamansi juice

Mix the sliced onion, chopped garlic, soy sauce, and calamansi juice with the soy beans and let the mixture stand 5 minutes. Cook the mixture in a covered pan until the onions are tender.

FRIED TOKUA WITH TOYO AND VINEGAR

- 1 cupful sliced tokua
- 2 tablespoonfuls sliced pork
- ½ sliced onion
- ½ cupful water
- 1 tablespoonful vinegar
- Lard
- 1½ tablespoonfuls toyo sauce

Fry the tokua until somewhat brown and set aside. Fry the onion with the pork, then add the vinegar and toyo sauce. Cook 2 minutes without stirring. Add the water and boil until the meat softens. Add the fried tokua and continue boiling until a very small amount of the soup remains in the pan.

SOY BEANS WITH COCONUT MILK

1 cupful boiled soy beans
2 cupfuls coconut milk
1 small piece of ginger, pounded
Salt to taste
3 sections garlic, pounded

Boil the coconut milk with the garlic, ginger, and salt, in a covered pan for 10 minutes. Add the soy beans and cook until the soup has been reduced to 1/5 its volume. Remove the garlic and ginger before serving.

SOY BEANS WITH SOTANGJON

1 cupful boiled soy beans
1 cupful of sotangjon cut to a length of ½ inch and soaked in water 10 minutes
4 tablespoonfuls sliced pork
2 tablespoonfuls sliced shrimps
2 tablespoonfuls chopped onion
2 tablespoonfuls chopped green onions
4 sections garlic, chopped
4 tablespoonfuls soy sauce
¼ teaspoonful pepper
2 cupfuls shrimp soup
2 tablespoonfuls lard

Fry the garlic, onion, pork, and shrimps in lard until brown. Add the soy beans, sotangjon, the shrimp soup, soy sauce, and pepper, and boil 10 minutes. Add the green onions, and boil 3 minutes longer.

SOY BEANS WITH BAKALAO

1 cupful boiled soy beans
½ cupful flaked bakalao (salt-codfish) soaked 2 hours in cold water before using
1 medium-sized onion, cut fine,
lengthwise into six parts
A few pinches of pepper
3 sections garlic
2 sweet red peppers cut length-
4 tablespoonfuls oil
4 medium-sized ripe tomatoes, chopped in pieces

Saute the garlic, onion, and tomatoes in oil. Add the flaked fish, soy beans, pepper, and enough water to cover the mixture. Boil until a small portion of the soup is left. Drop in the sliced sweet pepper and continue cooking 5 minutes.

SOY BEANS WITH CURRY

¾ cupful boiled soy beans
¾ cupful sliced squash
¼ teaspoonful curry powder
½ cupful coconut milk
¼ onion, silced into long thin wise
1 tablespoonful lard
¾ teaspoonful salt

Fry the onion in lard. Add the squash and the soy beans, and cook 10 minutes. Then add the coconut milk, the curry powder dissolved in a small quantity of water and salt, and boil 3 minutes.

SOY BEANS WITH ORANGE SAUCE

½ cupful boiled soy beans
¼ cupful orange juice
¼ teaspoonful grated orange rind
1 teaspoonful butter
½ teaspoonful salt
2 pinches of pepper
1 teaspoonful flour

Melt the butter and add flour, stirring constantly. Add salt, orange rind, and pepper. Then add the orange juice and cook until somewhat thick. Add the soy beans, and continue cooking for 2 minutes.

SOY BEANS WITH TOMATO SAUCE

½ cupful boiled soy beans
1 small onion, minced
2 sections garlic, chopped fine
½ teaspoonful salt
A few pinches of pepper
2 tablespoonfuls lard
⅓ cupful catchup

Saute the garlic, onion, and soy beans in lard and add to it the tomato catchup, salt, and pepper. Cook, stirring constantly, for 5 minutes.

TOKUA WITH EGG SAUCE

1 cake tokua
1 medium-sized onion, sliced into thin narrow pieces
½ teaspoonful salt
1 large tomato
1 egg
¾ cupful water
2 tablespoonfuls lard
2 sections garlic, chopped fine

Slice the tokua cake into thin slices, 1 inch long, and ½ inch wide. Fry in hot fat until brown.

Fry the garlic, onion, and tomato in lard and add the salt and the fried tokua. Continue frying, stirring constantly, for 2 minutes. Finally add the water and let the mixture boil 2 minutes. While boiling, gradually add the well-beaten egg, stirring the soup while adding. Boil the whole mixture not more than 2 minutes.

SOY-BEAN BALLS WITH WHITE SAUCE

1 cupful boiled soy beans
4 tablespoonfuls bread crumbs
1 egg
1 tablespoonful butter
½ small onion, chopped fine
Salt and pepper to taste

Chop the soy beans and onion together. Add the melted butter, lightly beaten egg, salt, and pepper. Mix thoroughly.

Shape into small balls, roll in bread crumbs, and fry in deep fat. Serve with white sauce made as follows:

WHITE SAUCE

Brown 1 tablespoonful of flour with ¼ teaspoonful salt and a few pinches of pepper in 2 tablespoonfuls butter. Add 1 cupful of soy-bean milk and cook until thick, stirring constantly to prevent lumping and burning.

SOY-BEAN BALLS

½ cupful boiled soy beans
1 egg
1 tablespoonful flour
½ onion, chopped into fine pieces
2 sections garlic, chopped fine
2 tablespoonfuls lard
1 teaspoonful salt
4 pinches pepper
1 cupful water
1 tablespoonful vinegar

Fry the soy beans and the chopped onion in 1 tablespoonful lard. Season with ½ teaspoonful salt and a pinch of pepper. Remove from the pan and cool. Beat an egg and thicken it with the flour. Mix it into the soy-bean mixture and form into little balls.

Fry the finely chopped garlic in 1 tablespoonful lard. Add 1 cupful of water, 1 tablespoonful vinegar, ½ teaspoonful salt, and 3 pinches of pepper, and boil without stirring for 3 minutes. Drop the balls in the boiling solution and cook about 5 minutes.

SOY-BEAN BALLS

½ cupful boiled soy beans
2 tablespoonfuls chopped pork
1 egg
2 tablespoonfuls flour
1 teaspoonful chopped green onion
1 tablespoonful sugar
1 teaspoonful salt
3 pinches ground pepper

Mix the above ingredients, form into small balls, and fry in deep fat until brown.

This may be served with catchup or with tomato sauce.

TOKUA CROQUETTES

1 cake tokua, mashed
1 medium-sized potato, boiled and mashed
1 small fish, fried and flaked
1 small onion, sliced fine
3 tomatoes, chopped fine
3 sections garlic, chopped
2 eggs
3 tablespoonfuls bread crumbs
½ teaspoonful salt

Saute the garlic, onion, and tomatoes in 1 tablespoonful lard. Add the flaked fish and salt, and fry the mixture 2 minutes. Fry the mashed tokua in a small amount of lard and mix it with the mashed potato. Make oval croquettes of the above mixture, the tokua and potato, and roll the croquettes in lightly beaten eggs, then in bread crumbs. Fry in hot lard until brown.

SOY-BEAN TOKUA PIE

½ cupful boiled soy beans
1 cake tokua, chopped fine
2 tablespoonfuls chopped pork
1 tablespoonful chopped shrimp
½ onion, chopped fine
1 medium-sized tomato, chopped fine
1 tablespoonful seedless raisins
2 sections garlic, chopped fine
½ cupful shrimp broth
½ cupful shrimp soup
teaspoonful salt
A few pinches of pepper

Fry the garlic, onion, and tomato in lard until brown. Add the pork, shrimp, soy beans, salt, and tokua and fry 5 minutes longer. Then add the pepper, seedless raisins, and shrimp broth, and cook 2 minutes. Use this mixture as filler.

Make the following crust:

1 cupful flour
5 tablespoonfuls butter
¼ teaspoonful salt
1 teaspoonful sugar

Sift the flour, sugar, and salt, and with the aid of a fork mix in the butter until the mixture becomes mealy. Gradually add cold water until the dough clings together. Divide into 2 parts. Roll one part to 1/12 inch thickness and place in a buttered pan. Bake in a hot oven about 7 minutes. Cool and spread the above filler. Roll the remaining dough to 1/12 inch thickness and use this as the top crust. Bake in a hot oven 20 minutes, keeping the bottom heat very low.

SOY-BEAN FRITTERS

1 cupful boiled soy beans
¼ cupful soy-bean milk
½ cupful flour
¼ cupful tikitiki flour
1 teaspoonful baking powder
2 tablespoonfuls butter
2 eggs
½ teaspoonful salt
6 tablespoonfuls sugar

Cream the butter and sugar. Add the beaten eggs, salt, soy-bean, milk and boiled soy beans. Mix thoroughly. Add the flour, tikitiki flour, salt, and baking powder sifted together, and stir thoroughly. Drop by spoonfuls in deep, hot lard and fry until brown.

BAKED SOY BEANS

2 cupfuls boiled soy beans
3 thin slices of bacon
2 heaping tablespoonful brown sugar
1 teaspoonful salt
¼ teaspoonful ground pepper
A few dash of paprika
1 tablespoonful butter
⅔ cupful catchup

Mix the above ingredients and bake in a moderate oven 30 minutes.

SOY BEANS AND MACARONI WITH CHEESE

1 cupful boiled soy beans
1 cupful boiled macaroni
¼ cupful grated cheese
⅛ teaspoonful pepper
½ teaspoonful salt
½ cupful catchup

Mix the macaroni, soy beans, catchup, pepper, and salt and a part of the cheese. Place in a baking dish and put the rest of the cheese on top of the mixture.

Bake 30 minutes in a moderate oven.

SOY BEANS AND MACARONI WITH TOMATO TAUCE

1 cupful boiled soy beans
1 cupful boiled macaroni
½ cupful tomato catchup or 1 cupful canned tomato
1 tablespoonful butter
1 teaspoonful salt
¼ teaspoonful pepper
1 section garlic, chopped
½ onion, chopped

Saute' the garlic, onion, and tomato in lard. Add the salt and pepper.

Place the soy beans and macaroni in alternate layers, in a baking dish, spread on butter, and pour tomato sauce over all. Bake 30 minutes.

SOY-BEAN AND TOKUA PANSIT

¼ cupful soy beans
½ cupful finely sliced tokua
½ cupful sliced pork
4 tablespoonfuls sliced shrimp
½ sliced onion
4 tablespoonfuls lard
6 tablespoonfuls green onion
3 sections garlic, sliced very thin
2 cupfuls mique
½ cupful stock (made from pork and shrimp)
2 tablespoonfuls toyo
1 egg, hard boiled
Salt to taste

Fry the mique in a small amount of lard; add 1 tablespoonful toyo sauce and set aside. Fry the sliced pork and the tokua separately. Saute' the garlic and onion; add the shrimp, pork, soy beans, tokua, 1 tablespoonful of toyo, and the stock, and cook until practically dry. Add the mique and a few pinches of salt, if necessary, and place the mixture on a plate. Garnish by sprinkling over it the green onion leaves, cut fine, and the slices of hard-boiled egg.

SOY-BEAN LUMPIA

1 cupful boiled soy beans
½ cupful sliced boiled pork
½ cupful shrimp, sliced thin, crosswise
½ cupful sliced tokua
1 chopped onion
1 cupful shrimp broth
2 sections garlic, chopped
2 tablespoonfuls lard
2 tablespoonfuls toyo
½ cupful sliced cabbage

Saute' the garlic, onion, and shrimp in lard. Add the pork, soy beans, tokua, and toyo, and fry 3 minutes longer. Then add 1 cup of shrimp broth (made by pounding the heads of shrimps and boiling them in water), and boil until practically dry. Add the cabbage and boil 3 minutes longer.

Remove from the fire and wrap about 2 tablespoonfuls of the mixture in each lumpia wrapping.

Serve with pounded garlic and lumpia sauce made as follows:

8 tablespoonfuls water
1 tablespoonful brown sugar
4 tablesponfuls flour
1 teaspoonful toyo

Make a smooth paste from the above by mixing all ingredients thoroughly and boiling the mixture, stirring constantly until thick.

FRIED SOY-BEAN LUMPIA

1 cupful boiled soy beans
4 tablespoonfuls pork, sliced fine
1 small onion, sliced fine
4 sections chopped garlic
2 hard-boiled eggs
1 cupful cubed tokua
½ teaspoonful salt
Lumpia wrappers

Wash and cut the tokua in small cubes. Sauté the garlic and onion; add the pork, soy beans, tokua, and salt, and cook 5 minutes. Lay aside. Slice fine the hard-boiled eggs and add them to the fried mixture. Wrap about 2 tablespoonfuls of the mixture in each lumpia wrapper, clossing the ends. Fry in deep hot lard until brown and crisp, and serve hot with vinegar-garlic sauce made by pounding garlic, adding this to the vinegar, with salt and pepper.

SOY-BEAN CHOP SUEY

1 cupful boiled soy beans
½ cupful beef, sliced in small pieces
2 tablespoonfuls native celery (kinchay), cut in small pieces
¾ teaspoonful white wine
2 tablespoonfuls oil or lard
A few small slices of ginger
A piece of cabbage, cut in small pieces
½ teaspoonful cornstarch

Fry the cabbage, soy beans, and kinchay in the oil, for 3 minutes. Add enough water to cover. Drop the pieces of ginger, the pieces of beef previously rolled in the mixture, of cornstarch a few drops of oil, and wine, and cook the mixture until about dry.

Make the following gravy:

Dissolve 1 tablespoonful of cornstarch in 1 cupful of beef stock and boil the solution until thick. Season with 1 teaspoonful of sugar and ¼ teaspoonful salt.

Mix the gravy with the soy-bean mixture before serving.

TOKUA CHOP SUEY

1½ cupfuls sliced tokua (bean curd)
¼ cupful sliced pork
½ cupful sliced onion
2 tablespoonfuls toyo (soy sauce)
Shrimp stock

Fry the onion, pork, and tokua for 10 minutes, stirring constantly. Add the soy sauce and enough shrimp stock, made from shrimp heads and shells, to cover the mixture. Boil 15 minutes.

Put in a deep dish and pour over it the gravy made as follows:

Dissolve 1 teaspoonful of cornstarch in 1 cupful of shrimp stock and bring to a boil. Add 1 teaspoonful of sugar, ¼ teaspoonful of salt, and ¼ teaspoonful of oil and cook the gravy until it thickens.

TOKUA-SOY-BEAN PANARA

½ cupful boiled soy beans
½ cupful finely sliced tokua
½ cupful boiled soy-bean sprouts
½ cupful shedded sweet potato
4 tablespoonfuls ground pork
4 tablespoonfuls chopped shrimp
1 small package seedless raisins
2 tablespoonfuls toyo sauce
⅛ teaspoonful pepper
½ onion, chopped fine
2 large tomatoes, chopped
2 sections garlic, chopped fine
3 tablespoonfuls lard

Fry the garlic, onion, and tomatoes in lard. Add the pork, shrimps, soy-bean sprouts, shredded sweet potato, toyo sauce, pepper, and cook 3 minutes. Then add the tokua, soy beans and raisins, and continue cooking, stirring constantly 5 minutes more.

Use the above as filler.

Make the following dough:

1 cupful flour
⅛ teaspoonful salt
½ teaspoonful sugar
2 egg yolks
¼ cupful water

Sift the flour with salt and sugar, and add the egg yolks. Knead thoroughly. Then add the water to the dough and continue kneading until the dough is very fine and smooth.

Roll to a very thin sheet and cut to about 2 inches square. Place about 1 tablespoonful of the above mixture at the center of each square and fold the thin sheet of dough, bringing the sides together. Cut the edges to give the shape of a half circle. Seal the open sides by pressing them with the tip of a fork. and fry in deep, hot fat until crisp.

SOY-BEAN OKOY

¼ cupful boiled soy-bean sprouts
½ cupful tikitiki flour
½ cupful cornstarch
1½ cupfuls shrimp soup
1 egg
2 tablespoonfuls green onion leaves, cut fine
¼ cupful sliced shrimp
6 sections garlic, sliced very thin
Salt to taste

Mix the tikitiki flour and cornstarch, and suspend in the shrimp soup. Mix the egg and stir well. Add the onion leaves, soy-bean sprouts salt to taste, and fry in deep, hot fat. When half cooked place a few slices each of garlic and shrimp on each portion and continue frying until brown.

SOY-BEAN KEKIAM

1 cupful chopped tokua
2 tablespoonfuls ground shrimp
1 teaspoonful green onion leaves, chopped fine
¼ cupful ground pork
2 eggs
¼ cupful flour
1½ tablespoonfuls toyo sauce

Mix the above ingredients and wrap in a piece of omentum to form a cylinder about 1 inch in diameter. Steam for 30 minutes. Cool and slice, thin, crosswise. Fry in hot fat until brown. Serve with vinegar to which has been added chopped onion, salt, pepper, and a little sugar to taste.

SOY-BEAN SALAD WITH LETTUCE LEAVES

1 cupful boiled soy beans
½ cupful shredded lettuce
2 hard-boiled eggs
1 tablespoonful oil
1 teaspoonful salt
1½ tablespoonfuls vinegar
A few pinches of ground pepper

Mix the oil, vinegar, salt, and pepper, and add this to the soy beans and lettuce previously mixed. Mound the mixture in a plate and sprinkle over it the yolks of hard-boiled eggs passed through a coarse sieve. Slice the hard-boiled whites into small pieces and scatter on the mound of salad.

SOY-BEAN SALAD

1 cupful boiled soy beans
1¼ tablespoonfuls calamansi-juice
1 tablespoonful oil
½ onion, chopped fine
¾ teaspoonful salt
A few pinches of pepper

Gradually add the oil to the calamansi juice, stirring constantly. Add the salt and pepper.

Mix the soy beans and onion and pour the dressing over the mixture.

SOY-BEAN SALAD

½ cupful boiled soy beans
½ cupful sliced string beans, boiled until tender
1 tablespoonful sliced shrimp
1 tablespoonful sliced sugar beets, blanched and cut into small cubes
1 potato, boiled and cut into small cubes
1 tablespoonful green onion leaves, cut fine
¾ cupful mayonnaise
¾ teaspoonful salt
A few pinches of pepper

Mix the above ingredients thoroughly, and serve on lettuce leaves previously washed and blanched.

SOY-BEAN BISCUITS

⅓ cupful soy-bean flour
⅔ cupful wheat flour
1 egg yolk
⅓ cupful milk
2 tablespoonfuls butter or Crisco
2 teaspoonfuls baking powder
½ tablespoonful sugar
¼ teaspoonful salt

Sift the flours, baking powder, salt, and sugar, 3 times. Knead the mixture with the butter.

Beat the egg yolk and add the milk. Add them to the flour mixture, mixing with a spoon to a soft dough. Toss on a floured board and roll lightly to ½ inch thickness. Cut with a biscuit cutter and bake in a hot oven, 450° F. from 10 to 12 minutes.

Cookies No. I

PLAIN SOY-BEAN COOKIES

- ¼ cupful soy-bean flour
- ½ cupful wheat flour
- ⅓ cupful sugar
- 1 egg
- ½ cupful butter or lard
- ½ teaspoonful vanilla

Cream the butter and sugar and gradually add the well-beaten egg; then the flour and vanilla. Drop small portions from the tip of a teaspoon onto a buttered sheet and spread thick with a knife. Bake in a hot oven until brown.

Cookies No. II

SOY-BEAN COOKIES WITH PILI NUTS

Follow recipe for Cookies No. I, adding to the batter 3 tablespoonfuls of chopped pili nuts.

Cookies No. III

SOY-BEAN COOKIES WITH CANDIED ORANGE PEEL

Follow recipe for Cookies No. 1, adding to the butter 3 tablespoonfuls of chopped candied orange peel.

Cookies No. IV

SOY-BEAN COOKIES WITH RAISINS

Follow recipe for Cookies No. I, spreading 2 or 3 seedless raisins on top of each cooky before baking.

SOY-BEAN-ROSELLE ROLL

- ½ cupful soy-bean flour
- 1 cupful wheat flour
- 1½ teaspoonfuls baking powder
- ¼ teaspoonful salt
- 3 eggs
- ¾ cupful sugar
- 5 tablespoonfuls milk
- ½ teaspoonful lemon or lime rine, grated
- Roselle jelly

Sift the soy-bean flour, wheat flour, baking powder, and salt together 3 times.

Beat the egg yolks until light. Add the sugar gradually. Beat while adding. Then add the flour alternately with the milk, and finally the flavoring.

Fold in the whites of eggs beaten to stiffness, and pour the entire mixture into a low baking dish not more than ¼ inch thick. Bake from 6 to 10 minutes in a moderate oven, 325 to 340° F.

Invert the pan on a paper sprinkled with powdered sugar. Cut the sides of the cake, or the hard portions. Spread over it the roselle jam, and roll. After the cake has been rolled, roll a piece of paper around it to keep the cake in shape.

Cut crosswise before serving.

SOY-BEAN ANGEL CAKE

¼ cupful soy-bean flour
½ cupful wheat flour
Whites of 5 eggs
½ cupful sugar
⅛ teaspoonful salt
⅔ teaspoonful vanilla extract
½ teaspoonful cream of tartar

Beat the egg whites, add the cream of tartar, and beat hard until the mixture is stiff, but not dry. Add the sugar gradually, mixing it thoroughly with the whites.

Sift the two kinds of flour with the salt three times, and fold it in the whites. Add the vanilla extract and transfer to an unbuttered angel-cake pan and bake from 50 to 65 minutes in a low oven, from 275 to 300° F.

Do not disturb while baking.

Remove from pan while hot.

SOY-BEAN LAYER CAKE

¼ cupful soy-bean flour
⅔ cupful wheat flour
1 teaspoonful baking powder
3 tablespoonfuls cornstarch .. ..
¼ teaspoonful salt
6 eggs
1½ teaspoonfuls lime juice
3 tablespoonfuls water
1 cupful sugar
1 teaspoonful lime rind, grated

Mix the soy-bean flour, wheat flour, baking powder, salt and cornstarch and sift three times.

Beat the egg whites until stiff.

Beat the egg yolks until thick. Gradually add the sugar and continue beating. Then add the lime juice, water, and the lime rind, and lastly the flour mixture, beating very lightly. Fold in the egg whites and transfer to well-buttered pans about ½ inch thick. Bake in an oven 350° F., for 20 minutes.

Invert the pan while hot and place the layers on a wire basket to cool.

Fill between the layers with soy-bean cream, made as follows:

½ cupful soy-bean milk
½ cupful sugar
¼ cupful water
2 eggs yolks

Boil the sugar and water to a medium thick syrup. Add the egg yolks beaten well with the milk, and cook to a thick consistency. Flavor with ½ teaspoonful vanilla.

This cream may be used as the frosting for the cake.

SOY-BEAN PUDDING

2 tablespoonfuls roasted soy beans
2 tablespoonfuls rice
1 cupful soy-bean milk
½ cupful water
4 tablespoonfuls milk or coconut milk
4 tablespoonfuls sugar or more if desired
2 egg yolks

Boil the rice and soy beans in the mixture of soy-bean milk and water, until the rice is soft. Add the sugar and continue boiling until the mixture is thick. Stir the egg yolk into the milk (coconut or canned) and add this to the boiled rice and soy beans. Mix thoroughly and transfer to a mold. Cook in a pan of boiling water for ½ hour.

Serve with medium thick syrup.

SAGO PUDDING WITH SOY-BEAN MILK

1 cupful soy-bean milk
1 tablespoonful sago
1 egg
2 tablespoonfuls sugar
A pinch, each, of nutmeg and salt

Boil the milk; add the sago, let it simmer gently, stirring constantly, until it becomes clear. Add the sugar and salt. Take the pan off the fire and let the mixture cool a few minutes. To the warm sago-milk, mixture add the well-beaten egg and the nutmeg. Transfer to a buttered pan and bake in a moderate oven for 30 minutes.

SOY-BEAN PUDDING WITH SHREDDED COCONUT AND RAISINS

1 cupful soy-bean milk
½ cupful mashed soy beans
¼ cupful shredded coconut
¾ cupful sugar
2 eggs
1 tablespoonful seedless raisins

Beat the eggs lightly.

Mix all the ingredients together and stir in the beaten eggs. Pour into a buttered pan and cook in boiling water until thick. Transfer to a moderate oven and bake to brown the top.

SOFT CUSTARD WITH SOY-BEAN MILK

1 cupful scalded soy-bean milk
2 eggs
¼ teaspoonful salt
A pinch grated lemon peel
5 tablespoonfuls sugar

Beat the eggs slightly; beat in the sugar and the salt. Add the hot milk slowly, stirring constantly, and then add the flavoring. Line the mold with very thick carmelized syrup; pour the egg-milk mixture into the mold, and cover with the lid. Cook in a pan of boiling water for 30 minutes, at the end of which time, transfer it to an oven to brown the top.

SOY-BEAN-ORANGE CUSTARD

1 cupful soy-bean milk
2 eggs
1½ tablespoonfuls flour
5 tablespoonfuls orange juice
5 tablespoonfuls sugar

Beat the eggs, add the soy-bean milk, sugar, and orange juice, and mix thoroughly. Dissolve the flour in a small amount of water and add this to the milk mixture. Strain through a cloth and heat to the boiling point.

Line a mold with very thick carmelized syrup and pour in the milk mixture. Cook in a pan of boiling water until the milk solidfies. Place in a moderate oven to brown the top.

SOY-BEAN ISLAND

½ cupful soy-bean milk
½ cupful and 4 tablespoonfuls sugar
3 eggs
¼ cupful water
A few drops of lemon extract

Separate the yolks and whites of the eggs. Beat the whites until stiff, add 4 tablespoonfuls sugar, and beat again until stiff. Boil the water and ½ cupful sugar and while boiling drop in the stiffly beaten egg whites by spoonfuls; turning each over after one minute of boiling.

Make the cream by adding soy-bean milk to the remaining syrup in which the egg white was cooked. Boil until thick. Add the slightly beaten egg yolks and cook until thick.

Pour the cream into a plate and place the whites, cooked in syrup, on it. Put about ¼ teaspoonful of the yolk-milk mixture on each mound of white, then top with a small amount of roselle jelly.

SOME COMMON FOODS MADE FROM SOY BEANS AND METHODS OF PREPARING THEM

I. SOY-BEAN MILK

Soy-bean milk was first extracted by Whai Nain Tze, a Chinese philosopher, long before the Christian Era. It is known to the Chinese as "fu chiang," or bean-curd sauce, and to the Japanese as "toniu," or milk from beans.

It is a white or creamy emulsion, of the consistency of milk, and has a characteristic odor and flavor, which may be masked by the addition of a small amount of vanilla extract or other flavoring extracts. It resembles animal milk in that the fat globules rise to the top on standing, it sours if left in a warm place; it is coagulated by certain mineral salts, rennet, pepsin, or acid; it can be condensed by evaporation; it can be fermented and used as buttermilk; and it may be used as milk in such preparations as cakes, cookies, chocolate, bread, custard, soups, biscuits, candies, etc.

In China and Japan, many factories are dedicated to the manufacture of soy-bean milk. The Chinese and Japanese people use it for drinking purposes and for infant feeding. A small quantity of sugar is added to the milk when it is used as a beverage. It is said to rank close to mother's milk in infant feeding.

Doctor Tso, after conducting his experiments on rats, found that soy-bean milk compares with cow's milk in vitamin A content, and is richer in vitamin B. The experiment of Hill and Stuart of Harvard Medical School in feeding 40 babies with soy-bean milk indicated that the babies thrived. They took it well, digested it, and gained on it. Since soy-bean milk is inferior to cow's milk in mineral content, the addition of 2 grams of calcium carbonate and 1 gram of sodium chloride (table salt) to every 100 grams of soy beans used for making milk will be needed if the child is to be entirely dependent on this milk for its food supply.

In addition to its value as food for both young and old, it also serves to check the summer diarrhea common to children. Sinclair (1916) in his experiments on babies who had diarrhea and intestinal disturbances, found soy-bean milk to be very useful in curing the majority of cases.

METHOD OF PREPARATION

The method generally employed in the preparation of soy-bean milk is to wash the beans thoroughly and to soak them in plenty of cold water for 12 hours, changing the water frequently. Then the beans are ground in a stone mill, adding small amount of water while grinding. (The total amount of water added is from three to five times that of the beans). The thin pastelike fluid is boiled about one hour and strained through a piece of cheesecloth to remove the impurities and the coarse particles. The filtrate, or the liquid passing through the cloth, is the soy-bean milk and the filter, or the solid collected in the cloth, is used as animal food. Block (1907) and Li Yu Ying (1911-12) claim that this filter does not even have traces of starch. Its composition, according to Block (1907), is 88.75 per cent water, .248 per cent nitrogen, .36 per cent ash, 0.04 per cent fat; and 10.85 per cent other substances.

The cake left after pressing the oil from the whole bean is also used for making soy-bean milk. To the meal or cake water is added (five times the bulk of the meal). The mixture is boiled and strained through a piece of cheesecloth.

Aro Itano[4] claims that the following methods of making soy-bean milk from soy-bean meal is better than the former: To the bean meal is added five times its bulk of water; it is then inoculated with B. coli and B. lactis aerogenes and left to stand 16 hours at room temperature. At the end of this time it is boiled one hour; filtered through a fine cheesecloth and to it is added salt in the proportion of one-half teaspoonful to one quart of the milk. Five per cent milk sugar is added if desired.

II. CONDENSED SOY-BEAN MILK

Condensed soy-bean milk may be prepared by adding 4 grams of dipotassium phosphate and 600 grams of sugar to 4 liters of soy-bean milk. It is then concentrated to a thick liquid in a vacuum.

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[4] Bull. Mass. Agr. Exp. Sta. No. 182 (1918) 4.

The condensed soy-bean milk may be used as condensed animal milk in the preparation of chocolate, for sweetening coffee and tea, and for culinary purposes.

III. SOY-BEAN MILK POWDER

The soy-bean milk powder is very rich in fat and protein. According to Li Yu Ying and Grandvoinnet (1911-12) its composition is water, 7 per cent; protein, 46.04 per cent; fat, 27.60 per cent; carbohydrates, 12.36 per cent; and mineral salts, 6 per cent.

The method employed in preparing powdered cow's milk is employed in the manufacture of powdered soy-bean milk. The original method of manufacturing powdered milk was to pour small streams of the milk on the surface of hollow steel rollers revolving in opposite directions and against each other. The rollers are heated inside by live steam. They are so adjusted as to allow a thin film of milk to pass between them. The stream of milk instantly dries upon touching the hot rollers and the thin film of dry milk coating them is scraped off by sharp knives fixed to the upper size of the rollers. Some manufacturers evaporate the milk to a thicker consistency befor passing it through the rollers.

The modern method of manufacturing powdered milk is by spraying or atomizing the liquid milk into dry air in the largest possible evaporating space, causing the moisture to separate from the milk and leave a dry powder. The milk is first condensed in a vacuum pan, then passed to sanitary tanks to which are attached sanitary pipes leading to the spray box. Through the "dry box," filtered, heated, dry air is circulated continuously and into this circulation of air the milk is atomized. Machines, consisting of a boiler to produce the steam for the coils to heat the air, filters for air filtration, and for circulating the air, are used in the manufacture of powdered milk. The moisture is taken up by the heated air and the atomized milk dries instantly in the form of flour or pulverized sugar and by gravity falls to the bottom of the drying box. The powdered milk is collected and packed in cans.

IV. SOY-BEAN CASEIN

Soy-bean casein is commercially manufactured in Cochin, China. The meal remaining after pressing the oil from the bean is ground through a stone grinder, water being added while the grinding takes place. Then the milky liquid is passed through a filter press. The residue is again ground with water. The milky fluid is heated in wooden vats, to the boiling point, and to it calcium sulphate is added in the proportion of 1 kilogram to 1,000 liters of milky fluid. The calcium sulphate precipitates the casein. This is collected by filtration through a fine cloth filter. It is purified by dissolving it in a very weak solution of sodium hydroxide and filtering. The casein is reprecipitated by the addition of acetic acid. The precipitate is collected by filtration and dried at a low temperature.

The soy casein may be used as a substitute for animal casein such as in the preparation of breads, sauces, concentrated biscuits, etc. It is also used as a medium for paints and water proofing for textiles, size for paper, dressing for textiles, etc.

V. SOY-BEAN CURD.

The soy-bean curd is known to the Chinese as "teou fu," to the Japanese as "toful," to the Annamites as "dan phu," and to the Filipinos as "tokua," or "toqua."

The soy-bean curd was first produced by Whai Nain Tze, before the Christian Era and was introduced into Japan from China by the Buddhists. It was introduced into the Philippines by the Chinese and has become a very popular food in Manila and in places where there are Chinese who manufacture it for sale. "Tokua" on account of its high fat, protein, and mineral salts content, is called by the Chinese as "meat without bone," or "the poor man's meat."

Table 3 and 4 will give the reader an idea of the value of "tokua" as human food.

The ash of the soy-bean curd, according to an analysis based on a moisture-free sample performed by W. H. Adoip and C.M. Wu,[5] contains 1.9 per cent of calcium oxide; 26 per cent of magnesium oxide, 0.3 per cent of potassium oxide, 0.03 per cent of sodium oxide, 2.28 per cent of phosphorus pentoxide, 0.01 per cent chlorine, 1.34 per cent of sulphur, and 0.01 per cent of iron. The coagulating medium used in the preparation of the curd analyzed was gypsum. The use of mother liquid of sea salt as coagulating agent would invariably increase the chlorine and sodium content.

The first step in the manufacture of soy-bean curd is to make the milk from the bean. (The method has already been described). Then the proteins are precipitated by the addition of a small quantity of mother liquid of sea salt, magnesium and calcium chloride solution, saturated solution of alum, or vinegar. Block (1906) has proven that chlorides and nitrates of calcium, barium, magnesium, and magnesium sulphate coagulate the soy-bean milk. Li Yu Ying and Grandvoinnet (1911-1912) coagulated the milk with rennet, while Piper and Morse (1923) coagulated it with 1 per cent solution of acetic, tartaric, and lactic acids. Sour milk and the water drawn from the bean curd after coagulation may also be used as coagulants.

When complete coagulation has taken place, the water is thrown away and the white mass, while hot, is placed in square wooden trays, about 3 inches deep, and covered by a thin piece of cloth. The ends of the cloth are folded over and a flat weighted lid is placed on top to press out the excess water. Then the solid cake is cut into small squares and sold as soy-bean curd or soy-bean cheese.

We have found the method used by the Chinese in Manila to be simple and satisfactory. First the soaked soy beans are ground through a stone mill, water being added while the grinding takes place. The milk is diluted with hot water until the total amount of water used is three times the volume of the soy beans. It is then boiled for about an hour. The boiled milk is strained through a piece of fine cheesecloth. The solid portion collected in the cloth is dumped in a wooden barrel. This is sold as hog feed. The liquid milky substance collected in another wooden barrel is added a small quantity of burnt gypsum (about 1.5 per cent by weight) suspended in hot water, and the mixture allowed to stand about thirty minutes. At the end of that time the milk has coagulated to a solid but soft mass about the consistency of a soft jelly. This is transferred to a shallow, wide basket lined with fine cheesecloth which allows the water to pass through. The white solid is then placed on a low table around which are seated on low benches Chinese laborers who wrap about three-fourths cupful of the soft mass, or bean curd, in a square piece of fine cheesecloth, about the size of a small handkerchief. After several minutes

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[5] Natr. Med. Journ. of China 6 (1920) 233.

standing the packages are unwrapped and rewrapped tighter in the same cloth. Then they are subjected to a very light pressure for a few minutes to get rid of the excess moisture. The bean curd or cheese is unwrapped, spread on shallow bamboo trays ("bilao") and partially dried at room temperature. Then they are dipped in a weak solution of turmeric to coat the outside with a light yellow coloring.

Some manufacturers soak the small cakes of curd in brine solution for a short time, then dip them in a solution of burnt sugar or molasses and bake them slightly before putting them on the market.

The amount of yield in the manufacture of soy-bean curd of "tokua" differs according to the amount of water used during the grinding and to the variety of bean used. In the commercial manufacture of "tokua", the general yield is about three and one-half times as much bean curd, by weight, as the original beans, or 50 grams of beans will yield about 175 grams of bean curd. Champion (1885) produced 185 grams of curd from 120 grams of beans; Paillieux (1880) produced one and one-half kilos of curd from one kilo of the beans. Morse[6] conducted a series of experiments on the yield of soy beans and found that the straw-yellow variety had the highest yield, or 34.3 grams of curd from 50 grams of beans and the black variety gave the lowest yield or 14.1 grams of curd from 50 grams of beans. The low yield obtained by Morse as compared with the commercially produced curd is due to the fact that he pressed the moisture out more thoroughly from the curd than those sold commercially. The bean curd obtained by Morse when analyzed showed a content of from 31.94 per cent to 44.7 per cent protein, and from 13.55 per cent to 20.33 per cent fat

On account of its high fat, protein, and mineral content; its high digestibility; its easy preparation; and its low market price, in comparison with meat or eggs, the soy-bean curd becomes a very desirable food in the Tropics. Oshima (1905) found in his digestion experiments that 95 per cent of the protein, and about 95 per cent of the fat are digested. About 99 per cent of the total carbohydrates is digested if eaten with rice. If eaten alone the "tokua" was found to be less digestible.

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[6] Piper and Morse, The Soybean Vol. I, 236.

Some common preparations made from soy-bean curd are "tahuri," frozen tofu, bean-curd brains, dry bean curd, thousand fold, fragrant dry bean curd, and fried tofu.

v-a "TAHURI" or "TAHULI"

"Tahuri" is manufactured in China and exported to the Philippines in large stone jars or in small tin cans. There are some "tokua" manufacturers in Manila that manufacture "tahuri" for local consumption.

Those that are imported from China are preserved in strong brine solution and the cakes are broken during the shipment so the liquid becomes like a thick emulsion containing pieces of the cured curd.

In Manila, the Chinese method of manufacture is to pack the large pieces of soy-bean curd, about 5 inches long, 4 inches wide, and 2.5 inches thick, with much crude salt, in empty gasoline cans. The curd is allowed to cure for a period of several months. During the curing period the beancurd changes from white to a brownish yellow color and develops a peculiar salty flavor to which the Chinese and many Filipinos are educated.

The composition of "tahuri" is shown in Table 5.[7]

Table 5.1—COMPOSITION OF TAHURI

Tahuri	Water	Protein	Nitrogen	Fat	chloride Sodium	SO3
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cen
Solid portion ...	55.76	14.56	2.33	7.12	12.7	.08
Liquid	57.86	9.56	1.53	2.09	16.38	.007

v-B FROZEN TOFU

The frozen tofu is known to the Japanese as "kori tofu." The fresh bean curd does not keep more than two days at room temperature. One way of keeping it is by freezing. The bean curd is cut into small pieces and then frozen hard. The protein shrinks when frozen and a porous cake is formed permeated with ice crystals. The frozen tofu is thawed out and dried in a vacuum. The dried products may be preserved indefinitely and used as fresh bean curd after soaking it in plenty of cold water.

c-C, BEAN-CURD BRAINS OR "TOFU NAO"

The bean curd brains known to many Filipinos as 'tojo" is the unpressed soy-bean curd. The method of making "tojo" is almost the same as the method used in making "tokua", only that a smaller amount of the coagulating agent is used, and the very soft but solid mass formed is left undisturbed in the wooden container until used. The Chinese used to peddle this preparation in a wooden pail-shaped container, through different parts of Manila, but on account of the Philippine Health Service regulations, this product is now sold in the markets only.

The "tojo" is served with a few tablespoonfuls of medium thick brown-sugar syrup, which gives it flavor, the "tojo" being almost tasteless. Sometimes it is eaten with sweet oil, sauce, and vinegar, or with finely cut meat and spices.

v-D, BEAN CURD

The fresh bean curd when dipped in burnt millet-sugar sauce and rubbed with fine salt will keep longer than the "tokua" and is called "topu khan." This preparation is usually eaten in soups.

v-E, FRAGRANT DRY BEAN CURD

The fragrant dry bean curd is so named from the fact that it has the consistency of smoked sausage called "hsiang khan" or fragrant dry.

It is made by subjecting the fresh bean curd to great pressure, which eliminates much of the water content. The pieces of semidry curd are soaked in a weak brine solution in which is dissolved burnt millet-sugar and to which is added powdered spices. The curd is then dried to hardness. This preparation keeps indefinitely and is used in soup making and in vegetable dishes.

v-F, THOUSAND FOLDS

Thin layers of fresh bean curd are placed on cheese-cloth, one on top of another, and then subjected to a great pressure. The thin layers of curd are dried partially and are rolled together like jamrolls. Then they are cut into strips and served in soups as noodles. On standing, the thousand folds mold and develop a meatlike flavor. This is fried in sesame oil and served in place of meat.

V-G, FRIED BEAN CURD

One of the commonest foods in China is the fried bean curd. The cake is cut into small squares and fried in deep fat until they will float. These are collected and fastened on a string of bamboo fibers. The fried bean curd is generally eaten with syrup and served between meals. It is said to supply energy to hard-working people.

VI, SOY SAUCE

The soy sauce is called by the Chinese, "ch'au yau," or drawing oil; or "pak yau" or white oil; by the Japanese "shoyu"; and the Filipinos, "toyo."

The soy sauce is a dark brown saltry liquid with a peculiar meat extract flavor. It is very popularly used in China, Japan, India, Java, Philippine Islands, and wherever there are Chinese restaurants. The soy sauce is known to many Americans and Europeans who frequent the chopsuey houses. Chinese records show that the soy sauce has been used in China for over 3,000 years. It is estimated that each Japanese consumes 2.5 ounces of soy sauce per day.

METHOD OF MAKING SOY SAUCE

The general method of making soy sauce used in China, described by Elizabeth H. Groff, is as follows:[10]

About 933 pounds of soy beans are soaked overnight, placed with plenty of water in a boiler and boiled until very soft. They are drained in large bamboo baskets. After draining them well and when the beans are almost cold they are poured on a mixing board and 800 pounds of flour is thoroughly mixed. The bean-flour mixture is then spread on trays to about 1.5 inches thick and the mixture furrowed by hand to the beans get the proper ventilation. The trays containing the soy-bean-flour mixture are placed in the mold room from one to two weeks. In about three days mold begins to grow on the beans. The mold is of yellowish green color and is a species of "Aspergillus." Sometimes an undesirable black mold grows. This should be removed as soon as seen in order to prevent it from spreading. The molded beans from the original 933 pounds of boiled beans and 800 pounds of flour are divided into 18

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[8] Piper & Morse, The Soybean, 1st Edition, (1923) 257.

equal parts and each part is placed in a wide mouthed stone jar and covered with a salt solution made from about 100 liters water and 53⅓ pounds of salt. The jars are allowed to stand in the yard to sun for a period of from two to six months or longer, the longer the period the better. The jars are covered at night and when it rains to prevent adulteration. During the sunning period the mixture is stirred from time to time. Some of the liquid is lost by evaporation during sunning and this is replaced by salt solution three days before the first drawing off of the soy sauce. About 80 pounds of soy sauce is siphoned in the first drawing. This liquid is allowed to stand to allow the solid particles to settle to the bottom and the clear supernatant liquid is separated by decantation or siphoning. The first drawn soy sauce is called "ten ch'au" meaning first drawing and the material remaining in the jar is called "teng shi", or "first salted". This is used as the base of various other sauces or as the base for the second drawing. The first drawing is placed in clean jars and sunned again from several months to several years depending on the quality of sauce the manufacturer wishes to produce. It is said that 5 years sunning will produce an extra quality sauce.

Generally, second, third, and fourth drawings are made. The second drawing is obtained by adding to the bean, or first salted, about 100 liters of water and 40 pounds of salt and allowing the jar to sun about three months. At the end of this time the second drawing is made, the procedure being the same as the first already described. The third and fourth drawings are made in the same manner as the first and the second drawings. The material remaining in the jar after the fourth drawing is sold as a cheap sauce or used as base for cheap sauces.

The first drawing is boiled at least two hours and bottled. It is sold at the highest price. The second drawing next highest, and so on. Often times the second, third, and fourth drawings are mixed and sold at a much cheaper price than the first drawing. Some manufacturers do not observe the sunning method for the second, third, and fourth drawings. In this case the beans are placed in a pan and boiled for at least three hours. Then they are allowed to cool and treated with

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[10] Soy Sauce Manufacture in Kwangtung, China, Philip. Journ. Sci. 15 (1919) 307-314.

salt. Candied molasses is sometimes added as a coloring and sweetening agent.

The following method of making soy sauce is an extract of the method described by Margaret B. Church.[11]

Soak the soy beans in plenty of water for about twenty hours, changing the water frequently to prevent fermentation.

Boil the beans to softness and drain well.

Spread the beans, in about a one foot layer, on a large tray-like platform to cool; turn the beans from time to time to hasten the cooling.

Roast wheat until crisp and crush evenly.

Mix the boiled beans and crushed wheat thoroughly in the proportions of from two parts of wheat to six parts of beans or from three parts of wheat to six parts of beans. The mixing must be done so that each bean may be coated with wheat.

Inoculate with mold (sold commercially in Japan as "tane koji" *Aspergillus flavis Link* or A. *oryzae* (Ahlb.) Cohn) and distribute the mixture in flat trays. Place the trays in the "koji" room, or mold room where the temperature is kept constant at 24° to 25°C.

After eighteen hours examine the trays. The temperature of the "koji" should not be above 29° C. A higher temperature is due to serious bacterial contamination. Stir the "koji" bringing the bottom to the top, and breaking the beans apart. Heap the "koji" in two piles extending the length of the tray instead of spreading it evenly on the tray. Place the tray again in the mold room the temperature of which is now kept at 30°C.

Stir again after eighteen hours and break the beans apart. Cool the mass to 24°C. After a thorough stirring, form four furrows of the beans, running the width of the tray, and return the trays to the mold room.

After fourteen hours from the last stirring examine the "koji" again. It should have a yellow coating of the fruiting heads of *Aspergillus*.

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[11] Soy and Related Fermentations, U.S. Dept. of Agr. Bull. 1152 (1923).

Empty the "shoyu koji" in a tub containing salt solution of 20° to 22°. In Japan the brine is made by dissolving one part of sea salt to two parts of water. Sea water is often used. The mass composed of molded beans and brine is called in Japan as "shoyu moromi."

On the first day inoculate the tub of "shoyu moromi" with four flasks, each containing 450 cubic centimers, of wort extract broth and 5 per cent salt solution with a yeast culture, Zygosaccharomyces sp.

Start a new batch of "shoyu-koji" and empty a mature batch into the mash vat each day. Mature "koji" mixed with brine solution forms the "shoyu-moromi."

Let the tub of "shoyu-moromi" stand about ten months, stirring the mash daily and passing a blast of air into the material to supply oxygen to the microorganisms.

Press the mash and boil the soy sauce about two hours before bottling.

Nashimura claims that during the ripening process the powerful enzymes of *Aspergillus oryzae* act upon the carbohydrates and products of the wheat and soy beans and develop an agreeable flavor. He also found that the time of manufacture may be shortened by milling the roasted wheat and boiled soy beans thoroughly, by applying a temperature of not less than 35° and not more than 40° C., and by adding alcohol directly. With this method, the length of time of manufacture is shortened to five weeks only.

Oshima (1905), however, claims that during the ripening process the chief chemical changes that take place result from the action of proteolitic and diastatic ferments, and from the alcoholic ferments. Part of the proteid materials of the beans are converted to more soluble forms by proteolitic ferments. Glucose is produced from the diastatic fermentation. The alcoholic fermentation is noticeable only in the early stage of manufacture. The alcohol produced is decomposed and acid and other products are produced which account for the agreeable flavor of the soy sauce.

VII, "NATTO"

"Natto" is a popular food among the Japanese people. It is used as a side dish and as a material in the preparation of confections. Its average composition is water, 61.84 per cent; albumen, 19.26 per cent; fat, 8.17 per cent; carbohydrates, 6.09 per cent; cellulose, 2.8 per cent; ash, 1.84 per cent. From these figures it may be easily seen that "natto" is highly nutritious. Besides, it is more digestible than boiled soy beans since it is softer and contains more peptone.

"Natto" may be made by boiling the soy beans to softness, and while hot, small portions are wrapped in rice straw. The bundles are tied at both ends and placed in a closed room where the temperature is kept from 35° to 40° C for twenty-four hours. The beans ferment and become a thick viscid mass with a peculiar odor.

VIII, "HAMANATTO"

"Hamanatto" is another Japanese preparation made from soy beans. It is of a brown color, of sticky consistency, with a salty taste, and has an odor similar to the fresh crust of brown bread.

It is prepared by boiling the beans to softness, than spreading them on straw mats, and mixing with them wheat flour in the proportion of six parts of flour to ten parts of beans. When the molds grow on the mixture it is sunned for three days. On the twelfth day ginger and salt are added and the mixture is kept in tubs for a period of thirty days. A weight is placed on top of the mixture while standing in the tub. which makes it compact.

Sawa[12] found "hamanatto" to contain water, 44.74 per cent; albuminoid nitrogen, 3.57 per cent; fat 3.44 per cent; fiber, 6.87 per cent; total carbohydrates, excluding cellulose. 8.40 per cent; total ash, including salt added 18.54 per cent. He also found that at least three different kinds of bacteria are present in this product.

IX, "YUBA"

"Yuba" is popular among both Chinese and Japanese. It is a thin, glossy, cream yellow brittle sheet very rich in protein. It is used in soups, as a wrapper, or fried.

"Yuba" is prepared by boiling soy-bean milk for about an hour. Then a small quantity of auramine is added. A thick film is produced on the surface. This is removed by passing a stick underneath the surface. It is dried over a charcoal fire.

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[12] Cited by Piper and Morse, The Soybean, 1st Edition (1923) 245.

Table 8 shows the composition of "yuba" according to analyses made by Oshima and Nagao.[18]

TABLE '—Composition of yuba

Authority	Water	Protein	Fat	Carbohydrates	Ash
	Per cent	Per cent	Per cent	Per cent	Per cent
Oshima	18.31	49.65	18.0	11.82	2.22
Nagao	22.85	51.60	15.62	7.31	2.82

X, "MISO"

"Miso" is daily consumed by the population in the rural district of Japan. It is estimated that each person consumes an average of 40 grams of "miso" per day.

The two most important kinds of Miso are the white and red "miso". The white "miso" contains a small amount of salt and is fermented with rice "koji" for a period of four days only. It keeps only about ten days. The red "miso" is red in color, is more salty than the white "miso," and is fermented with barley "koji" for from one and one-half to two years. It keeps indefinitely. The composition of white and red "miso" is shown in Table 9.[14]

"Miso" is generally prepared by steaming the beans twenty-five hours. They are cooled and rubbed to a thick, uniform paste. To this paste is added the proper amounts of powdered "koji," salt, and water and the mass mixed thoroughly. This is placed in a wooden vat and the vat kept at a room temperature of 15° to 20° C.

If white "miso" is desired a small amount of salt is used. Rice "koji" is used to produce the flavor desired.

"Miso" is used in soup making, in cooking vegetables, in flavoring dishes, and in pickling vegetables.

The "koji" used for manufacturing "miso" is similar to that used in making "sake", a wine made by the Japanese

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[13] Cited by Piper and Morse, The Soybean, 1st Edition (1923) 247.

[14] Kellner (1889); cited by Piper and Morse, The Soybean, 1st Edition (1923) 250.

from rice. It consists of barley or rice with a culture of *Aspergillus oryzae*, which contains diastatic, proteolitic, and inverting ferments.

XI, SOY-BEAN FLOUR

Soy-bean flour is made by grinding the dried soy beans or the press cake remaining after the oil has been pressed from the bean. It has become an important source of food for persons requiring a low starch diet, as diabetic patients, etc. In England there is on the market soy flour composed of 25 per cent soy-bean flour and 75 per cent wheat flour. This is being used in making soy bread. In Amsterdam soy biscuits are manufactured from this flour, which are being exported. In the United States soy-bean flour is also on the market. Soy-bean flour, with gluten, makes satisfactory bread, muffins, crackers, biscuits, macaroni, and several other preparations, as specialities for diabetic persons.

According to the findings of Bowers (1919) the protein of the soy-bean flour, if thoroughly cooked, is 91 per cent digestible; the carbohydrates about 94 per cent digestible.

Table 10 shows the composition of soy-bean and some other common flours on the market.[15]

The soy-bean oil is obtained from the bean by expression. The soy oil belongs to the semidrying class. It resembles cotton-seed oil in some respects and in its physical properties that of linseed oil. The crude oil is from yellow to dark brown color and has a faint beany odor. After refining and deodorizing it, it becomes lighter in color and nearly odorless and tasteless. It is used in the manufacture of lard and butter substitutes and salad oils. It is also being very satisfactorily used in the manufacture of soaps on account of its low content of free fatty acids and unsaponifiable matter; and is also used in paints; waterproof goods; printing inks; lubricating; lighting; candle making; the manufacture of artificial rubber; the manufacture of linoleum; toilet powder; etc.

XIII, SOY-BEAN MEAL

The cake remaining after the oil has been expressed from the bean is the meal. It is used as stock feed, fertilizer, and

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[15] Piper and Morse, The Soybean, 1st ed. (1923) 224.

XII, SOY-BEAN OIL

human food. Its composition is as follows: water, 7.59 to 17.37 per cent; protein, from 40.8 to 44.65 per cent; fat, 5.04 to 8.77 per cent; nitrogen-free extract, 21.12 to 30.89 per cent; ash, 4.90 to 6.59 per cent; fiber, 3.58 to 6.95 per cent.

The soy-bean meal when ground to a fine powder makes a fine flour for preparations that require a low starch content. It is also used for the preparation of soy-bean curd and soy-bean milk.

XIV, SOY-BEAN COFFEE

The soy bean when properly roasted and prepared makes a drink very similar to coffee in appearance and in flavor. This is being extensively used in Europe, especially in Switzerland, and in the United States, as a coffee substitute. In Japan and Russia roasted soy beans or soy-bean coffee is put up in small packages and sold as coffee.

XV, SOY-BEAN SPROUTS

Soy-bean sprouts may be grown by first thoroughly washing the beans and soaking in water several hours. They are then transferred to an earthen jar that contains a hole in the bottom for draining the excess of water, and this is lined with either a piece of bamboo mat or cloth. The beans are then covered with straw to keep out the light. They must be moistened at least three times a day. In about four to five days the sprouts are fully grown and ready for cooking. The soy-bean sprouts may be used in any way that green vegetables are used.

Table 11 shows the composition of soy-bean and mung-bean sprouts.[16]

TABLE II—Composition of soy-bean and mung-bean sprouts.

Bean	Water	material Nitrogen	Fat	drates Carbohy-	salt Mineral
	Per cent	Per cent	Per cent	Per cent	Per cent
Soy	66.98	14.73	5.95	4.04	3.41
Mung	91.21	3.41	0.28	2.12	0.48

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[16] Piper and Morse, The Soybean, 1st Edition, (1923) 227.

Chapter V

ROSELLE RECIPES

By Maria Y. Orosa

WITH THE ASSISTANCE OF MEMBERS OF THE DIVISION

Roselle, Hibiscus sabdariffa L., is native to India and Malaysia. It is used for making tarts, jellies, and wine. Roselle has been extensively cultivated in Australia for many years and as early as 1892 two large factories for putting up roselle jam were built there. The date of the earliest introduction of roselle into the United States has not been definitely determined but it is known that about 1896 it was brought to California from Australia.

Four varieties were introduced into the Philippines by P. J. Wester, horticulturist, Bureau of Agriculture, in 1905, the best of which are Rico and Victor. The plants of the Rico variety are from 1 to 2 meters tall, and are more spreading than the other varieties. The fruit is dark red. The red portion is the fleshy calyx. The fruit is from 40 to 50 millimeters long and 28 to 32 millimeters in diameter.

The plants of the Victor variety are more slender and upright. It fruits somewhat earlier than the Rico. The fruits are reddish and are about the same size as the Rico variety, but taper toward the end. Preparations from both the Rico and Victor varieties are of a brilliant red color.

According to P. J. Wester, roselle will thrive on any fertile soil, but will grow best in places where annual rainfall is ample. In the Philippines, the best time for planting is during the month of May and not later than June, and the fruit should be gathered 15 days after blossoming, otherwise the fruit will be fibrous and less juicy.

The yield per hectare is from 6,500 to 8,000 kilos. In Hawaii, up to 16,800 kilos are harvested per hectare if planted as intercrop with rubber, and if the entire field is devoted to roselle, the yield goes up to 19,000 kilos per hectare. Granting that the yield per hectare is only 8,000 kilos, if the crop is sold at five centavos per kilo, it means a gross income of ₱400 per hectare, which exceeds the income from planting rice, corn, or many other articles of food raised here.

The young leaves of the roselle are used as a substitute for spinach, or they may be cooked with fish or meat for making "sinigang" (a typical Filipino dish of either fish or meat cooked with an acid fruit or acid leaves, such as mango or tamarind leaves).

The Rico and Victor varieties are desirable for the preparation of drinks, jams, and jellies on account of their attractive, brilliant red coloring. The flavor of roselle is very similar to that of the cranberry, a very expensive article of food in the Philippines, which is important from the United States, and sells fresh at from ₱1.35 to ₱1.50 per kilo. The jam, jelly, sauce, and other preparations made from roselle are very similar in appearance and taste to those made from cranberry.

There is little doubt that if some of the excellent preparations made from roselle become better known, its planting and cultivation in our laboratory claim that it excels the many soft drinks commonly sold in Manila and the provinces from which thousands of pesos are realized daily. Many who have tried the roselle jelly have expressed the wish that it were available in the groceries.

The preparation of juice, jam, jelly, sauce, etc. at home and commercially, will mean an added delicacy for our table. a source of income for idle farms; utilization of the soil between trees as intercrop; a new article for export; reduction of imported juices, syrups, jams, jellies, sauces, etc., which are valued at hundreds of thousands of pesos annually.

PREPARATIONS

Some preparations that may be made from roselle are:

Jelly
Jam
Butter
Preserve
Conserve
Marmalade
Catchup
Sauce
Juice
Syrup
Wine
Vinegar

Nota
Chutney
Pickle
Paste
Punch
Cocktail

SOME USEFUL HINTS

The fruit of the roselle consists of the calyx, the red portion, and the capsule containing the seed. It is rather difficult to separate the calyx, or the edible portion, from the capsule, or refuse, with the fingers. By cutting the base of the fruit with a sharp knife the capsule can be easily removed.

Only porcelain or aluminum pans should be used in cooking the fruits as the acid content readily attacks other metals.

Wooden spoons are best for stirring.

Cheesecloth may be used as a filter for the juice, although felt is better.

Only stainless knives should be used for cutting.

If the preparation is intended to keep indefinitely it is best to have the bottles ready before starting the work. There are two types of preserving jars in the market. The screw-top and the glass-top jars, of pint quart, and half gallon capacity. The screw-top jars are cheaper, but those that have the glass top have a few advantages over the others: namely, that the tops can be used repeatedly, that they are easier to seal and to open, that the detection of mold is made easier, and that they present a better appearance than those with the screw top.

Before preparing the jelly, one should become familiar with the steps in the preparation of jelly, such as the detection of the jellying point, and other important facts regarding jelly making.

ROSELLE JELLY

Cut the base of the fruit with a sharp knife.

Separate the calyces and wash them thoroughly.

Place in a porcelain pan and add enough water to cover them.

Boil briskly for 25 minutes. Strain the juice through cheesecloth (felt is better).

To each cupful of juice add from ½ to ¾ cupful of sugar, and boil in a porcelain pan, over a strong fire, for 25 to 30 minutes, or until the jellying point is reached.[1]

Fill the jelly glasses while the jelly is hot and let them stand undisturbed to cool.

Pour melted paraffin over the solid jelly and adjust the metal cap of the glass.

Label and store.

The jelly should be made as quickly as possible, otherwise a thick syrup results. In order to prevent too otherwise a thick syrup results. In order to prevent too long cooking, a small quantity should be made at a time.

ROSELLE JAM

Cut the base of the fruit with a sharp knife and separate the calyx from the capsule. Wash the calyces thoroughly and boil in a porcelain pan with just enough water to barely cover them. Boil until they are tender. Pass the calyces through a meat grinder or mash with a masher and add sugar in the proportion of ¾ cupful of sugar to a cupful of calyces. Boil the mixture to a medium thick consistency.

If it is desired to keep the jam indefinitely, transfer the jam while hot to clean pint preserving jars, half seal the jars, and sterilize for 25 minutes in boiling water.

ROSELLE BUTTER

Separate the calyces and wash them thoroughly. Boil in small quantity of water until they are soft.

Cool and pass the pulp through a fine sieve (sinamay cloth may be used).

Measure the pulp and to each cup add from ½ to ¾ cupful of sugar. Cook until the mass is medium thick.

Transfer the butter to pint jars; half seal them, and sterilize them for 25 minutes in boiling water.

Seal the jars completely after sterilization and cool.

Label and store in a cool, dry place.

ROSELLE PRESERVE

Separate the calyces from the capsules and wash them thoroughly.

Place them in a porcelain pan, add enough water to half cover them, and sugar in the proportion of 1 cupful of sugar to each cupful of calyces.

Cook slowly for 30 minutes.

Transfer while hot to pint or quart jars. Half seal the jars and sterilize; the pints 25 minutes and the quarts 30 minutes, in boiling water.

Seal the jars hermetically after sterilization, and let them stand in an inverted position on a dry board.

Examine for leaks, label, and store them in a cool, dry place.

ROSELLE CONSERVE

- 4 cupfuls roselle calyces
- 1 cupful cold water
- 2 small boxes seedless raisins
- ⅔ cupful boiling water
- 1 cupful shelled pili nuts, cut into small pieces

Wash the roselle thoroughly. Place it in a porcelain pan, add the cold water and boil with the pan covered, until the calyces are soft.

Pass through a sieve, adding the boiling water while sifting.

Add the raisins and sugar, and boil for 15 minutes.

Add the nuts and continue cooking for 25 minutes.

Transfer the conserve while hot to pint jars, half seal them, and sterilize for 25 minutes in boiling water.

Seal tightly after sterilization and cool.

Label and store in a cool, dry place.

ROSELLE MARMALADE

Proceed as in roselle jelly, adding to the boiling jelly pieces of calyces boiled in 1 to 1 syrup.

ROSELLE PASTE

Proceed as in roselle butter but cook the butter longer until the mass becomes solid when cooled.

While hot, pour in a shallow pan about ¼ inch thick.

Cool and cut to desired pieces. Wrap each piece in oiled paper.

Keep in tightly closed jars to prevent weeping, or watering.

ROSELLE CHUTNEY

Wash the calyces thoroughly and drain.

4 cupfuls roselle
4 cupfuls brown sugar
1 ½ cupfuls vinegar
1 hot pepper, sliced
1 section garlic, sliced fine
1 small piece of giner root, sliced to thin pieces, crosswise
1 small piece of ginger root,
1 teaspoonful salt

Boil the vinegar, salt, and brown sugar and strain through a piece of cheesecloth. Return to the pan and boil again until it becomes medium thick. Add the roselle and continue boiling until soft. Add the raisins, the sliced garlic, and hot pepper and boil for 5 minutes. Lastly, add the sliced ginger and boil until thick.

Pack in well sterilized jars while boiling hot, and seal hermetically.

Roselle chutney may be served with curries, roast meats, sausages, and fried fish.

ROSELLE PICKLE (SWEET-SOUR)

Wash the calyces and drain.

Place in a porcelain pan and add a very small quantity of cold water. Cover the pan and cook slowly until the roselle is tender.

Make a solution of 2 cupfuls of brown sugar, 1 cupful of vinegar, 2 teaspoonfuls salt, and boil. Strain through a piece of cheesecloth.

Place the solution in a porcelain pan, add the cooked roselle, and boil to a thick consistency.

Add small amounts of nutmeg, allspice, and cinnamon, and cook 1 minute longer, stirring constantly.

Pack while boiling hot in well-sterilized jars and seal tightly.

Label and store.

ROSELLE CATCHUP

Wash the calyces of the roselle thoroughly.

Boil for 30 minutes in enough water to half cover the calyces.

Pass the pulp through a piece of "sinamay" cloth.

Place the pulp in a porcelain pan and to each cup of the pulp add:

1 teaspoonful salt
¼ cupful sugar
1 teaspoonful mustard
½ teaspoonful ground white pepper.
5 tablespoonfuls vinegar
¼ teaspoonful each, of cloves cinnamon, nutmeg, allspice, and paprika

Mix the spices and tie in a piece of cloth.

Boil the roselle pulp with the salt, vinegar, sugar, pepper, and mustard dissolved in the vinegar, for 15 minutes. Drop the bag of spices in the boiling pulp and continue cooking until the catchup reaches the consistency of tomato catchup. Remove the bag of spices, transfer the catchup while hot to clean, sterilized bottles seal the bottles and sterilize for 15 minutes in boiling water.

One-tenth of 1 per cent of sodium benzoate may be added to the catchup. If this is added no sterilization will be needed.

ROSELLE SAUCE NO. 1

Wash the roselle thoroughly and drain. Chop to small pieces with a stainless butcher knife and place in a porcelain pan.

To ½ kilo of roselle calyces add:

1 cupful water
⅛ cupful chopped onion
⅛ cupful chopped green pepper
⅛ cupful chopped red pepper
⅓ cupful sugar
½ teaspoonful ginger, chopped fine
⅛ teaspoonful each, of cinnamon, mustard, and nutmeg
1 tablespoonful salt
⅛ teaspoonful cayenne pepper

Mix the above ingredients together and boil until medium thick.

Place in clean jars, half seal, and sterilize for 25 to 30 minutes.

Seal completely after sterilization.

Label and store.

ROSELLE SAUCE NO. II

Clean the roselle thoroughly. Pass through a grinder. To each pint (2 cupfuls) of chopped roselle add 1 pint of water;

1 cupful sugar and boil 30 minutes, or until thick. Add ½ cupful of port wine and mix thoroughly. Transfer to well-sterilized jars and seal completely.

ROSELLE JUICE

Clean the roselle calyces and place them in a porcelain pan. Add enough water to barely cover them. Boil for 30 minutes. Press the juice and strain it through a piece of fine cheesecloth. To 10 cupfuls of juice add 2-½ cupfuls sugar and bring the mixture to a boil. Filter again and place the clean juice in a large porcelain, aluminum, or glass container, and let it stand 24 hours undisturbed. Solid particles will settle to the bottom. Siphon or decant the crystal juice to another container. Bring it again to a boil and while boiling transfer to clean jars or bottles; seal; and sterilize the pint jars 15 minutes and the soda bottles 10 minutes, in boiling water.

ROSELLEADE

Prepare the juice as in roselle juice. Add ⅛ teaspoon of sodium bicarbonate to each bottle of juice, just before sealing, or add the same amount of sodium bicarbonate to a glass of juice just before drinking it.

ROSELLE SYRUP

Extract the juice from the calyces by boiling, as in roselle juice. Concentrate the juice to one-half its original volume by boiling in a wide, shallow, porcelain pan. Add sugar in the proportion of 1 cupful of roselle juice to 1-½ cupfuls sugar. Bring to a boil and strain through a piece of fine cheesecloth Bottle while hot in well-sterilized bottles and seal completely.

ROSELLE WINE

Follow the recipe for roselle juice, changing the amount of sugar added to 1-½ cupfuls for every 10 cupfuls of roselle juice. Dissolve 1 small yeast cake in the juice. Place the juice in a glass, porcelain, or wooden container, cover the container with 4 thicknesses of cheesecloth, and let the juice ferment for from 5 to 7 days. The product is then ready to use and may be bottled and sealed tightly. The wine may be aged in wooden barrels to improve its flavor, although the freshly fermented juice compare favorably with the "tintos" made and sold in Manila.

ROSELLE WINE[4]

Roselle wine may also be made from the entire plant, although here again a product of richer color and better flavor results from using only the calyces. The plant is cut and treated as in making the syrup. After filtering through cloth, the juice is placed in a clean cash previously scalded with boiling water. For every 4 liters of juice use 1 kilogram of sucrose made into a thick syrup with boiling water, and poured to the juice. Suspend yeast in warm water, add this to the contents of the keg, and mix thoroughly by stirring. The keg should now be carefully covered, or if with closed ends the bung may be stopped with loose cotton. To obtain a good wine, foreign ferments should be excluded. The cask is then put aside and allowed to remain undisturbed during fermentation. Within a week this will be near completion. If a sparkling wine is desired, the juice is racked off before fermentation has stopped and it is stored in bottles with corks securely wired to prevent expulsion. If a still wine is to be made, the bottling is delayed until fermentation has ceased. Age will improve the flavor and bouquet, but the young wine is very attractive in taste and appearance. As made from the entire plant, it has a light reddish color and sweet refreshing taste. A complete analysis of the till wine so made gave the following result:

Analysis of roselle wine.

	Per cent
Total acidity as malic by tiration	0.64
Total acidity as d-malic by polarization	0.62
Volatile acids as acetic	0.02
Alcohol by volume	8.80
Specific gravity	1.0631
Specific gravity dealcoholized wine	1.0762
Extract	19.79
Direct polarization °V.	—37.20
Invert Sugar	13.68
Sucrose	1.05
Protein (N x 6.25)	0.092
Ash	0.380
P2O5	0.016

ROSELLE VINEGAR

Proceed as in roselle wine and when the alcoholic fermentation is completed, add a small amount of mother of vinegar, or good, fresh vinegar, and let the solution stand in a glass or porcelain container with 4 thicknesses of cloth covering it, to prevent the fruit flies from getting into it. The vinegar is ready in about 2 months, or longer. Decant the clear vinegar and bottle in clean, dry bottles.

ROSELLE NATA

While the acid or acetic fermentation is taking place, a pinkish, gelatinous film grows on top. In about 3 weeks the film is from ½ to ¾ of an inch thick. Collect this "nata" and soak it in plenty of water. Change the water at least four times a day. Continue the operation until the odor of the vinegar can no longer be detected. Slice to desired pieces and blanch in boiling water. Rinse and drain. Make a syrup of 1 part sugar and 1 part water. Boil slowly in this solution 30 minutes. Drain and pack the pieces in preserving jars. Strain the syrup left after boiling the nata in it, and to every cupful add ¼ cupful of roselle syrup. Bring to a boil and fill the jars; sterilize for 30 minutes; and seal completely after sterilization. Cool the jars in an inverted position. Label and store in a cool, dry place.

ROSELLE PUNCH NO. I

5 cupfuls roselle juice
Juice of 5 limes
1 cupful orange juice

Mix the above and serve cold.

If intended to keep, bring to a boil and bottle while hot. Sterilize the bottles 10 minutes, in boiling water.

ROSELLE PUNCH NO. II

5 cupfuls roselle juice
1 cupful chopped pineapple
1 cupful orange juice
Juice of 3 limes

Mix the above and proceed as in Punch No. I. This must be served cold.

ROSELLE-WHISKY PUNCH

1 cupful roselle juice
From ½ cupful to 1 cupful whisky
1 teaspoonful lime juice

Mix and chill. Serve cold.

ROSELLE-FRUIT COCKTAIL

2 cupfuls roselle juice
1 cupful shredded native pineapple
½ cupful Cherry wine
6 tablespoonfuls brandy

Mix the roselle juice and shredded pineapple and boil 10 minutes. Add the cherry wine and brandy and bottle in sterilized bottles. Half seal and sterilize 15 minutes. Seal completely. Cool and store.

Add 1 cupful of banana cut into small cubes and 1 cupful of mandarin pulp, and chill before serving.

ROSELLE SANDWICHES

Sandwiches may be made from sliced American bread, butter, and roselle jam, jelly, conserve, or butter.

ROSELLE-CHEESE SANDWICHES

Make a paste from roselle jelly and grated cheese. Insert this filler between two slices of bread from which the crust has been removed.

ROSELLE-PORK SANDWICHES

Make two-layer sandwiches using thin slices of roast pork in one layer, and roselle jelly, jam, or butter in the other.

FRENCH TOAST WITH ROSELLE SYRUP

Slice the bread to ¼ inch thick. Cut off the crust and dip in a mixture of 1 cupful of milk, 3 well-beaten eggs, and a few pinches of salt. Fry in hot, deep lard until brown. Serve with roselle syrup.

ROSELLE PIE NO. I

1 ½ cupful flour
6 tablespoonfuls butter or shortening
1 teaspoonful salt
Water, enough to moisten

Sift the flour and salt twice, and work in the butter or shortening with the fingers until it has the consistency of corn meal. Add the water gradually, adding only enough so the dough clings together. Chill and divide into two parts. Roll out one part to ¼ inch thickness, keeping the paste as nearly circular as possible. Spread in a pie pan and cut the sides with a knife. Prick the bottom with a fork and bake until the crust is brown. Fill with roselle preserve, jam, or conserve, adding a small quantity of water if needed, and cover with the top crust. Bake in a moderate oven until the top crust is brown. The top heat of the oven may be used while baking the top crust.

ROSELLE PIE NO. 2

1 cupful roselle juice
½ cupful sugar
3 tablespoonfuls flour
3 eggs
¼ teaspoonful salt
1 tablespoonful butter
5 tablespoonfuls sugar for the meringue

Boil the roselle juice; add the sugar, salt, and the flour suspended in a small amount of water; and continue cooking, stirring constantly over hot water, for 15 minutes. Add the butter and egg yolks and stir in quickly. Take off the fire, cool, and fill a baked pie crust made as per directions under Roselle Pie No. 1. Cover with meringue made from stiffly beaten egg whites and sugar, and bake in a slow oven (300°F) until brown.

ROSELLE TARTLETS

1 cupful roselle calyces thoroughly washed and chopped
1 cupful sugar
¼ cupful water

Mix the above and boil 15 minutes. Turn into small pie pans, about 3 inches in diameter, previously covered with pie crust made as in Roselle Pie No. 1. Cover with small strips of pie dough, about ⅛ of an inch wide, and bake in a slow oven for 15 minutes.

ROSELLE FRIED PIE

Drain the juice from roselle conserve, the preparation of which has already been described.

Make puff paste, roll out to ⅛ of an inch in thickness, and cut to small circles about 2 inches in diameter. Place 1 tablespoonful of roselle conserve in the center of each circle and moisten the sides with cold water. Cover with another circle of paste and press the edges firmly together. Fry in deep, hot fat until brown.

PUFF PASTE

1 cupful flour
1 cupful butter
1 egg yolk
Cold water, enough to moisten
1 teaspoonful sugar

Divide the butter into two parts, and place in an ice box or refrigerator to chill.

Sift the flour and sugar twice. Work in ½ cupful of butter. Then moisten with the egg yolk and enough water to bring the dough together. Knead until smooth. Roll out to ½ inch thickness. Fold in the rest of the butter and roll as thin as possible. Fold the paste in 3 layers and place in the ice box to harden. When cool and firm, roll out again and fold in 3 layers as previously done, and place again in the ice box to chill (for about 20 minutes). Roll out to ⅛ inch thickness.

ROSELLE PUFF

1 cupful flour
1 cupful butter
1 tablespoonful sugar
Cold water, enough to moisten
1 egg yolk

Proceed as in puff paste.

Roll out to ½ inch thickness and cook in a hot oven (400°F.) until brown.

Remove the inner portion of the puff paste while hot, and cool. Fill with roselle marmalade and chopped pili nuts.

ROSELLE PATE CHOUX

1 cupful flour
1 cupful butter
2 tablespoonfuls sugar
1 cupful water
¼ teaspoonful vanilla extract
A few pinches of salt
2 egg yolks

Place the water, butter, salt, and sugar in a pan and bring to a boil. While boiling, take the pan from the fire and add the vanilla. Then add the flour, previously sifted, and beat well. When a smooth paste is produced, place the pan back on the fire and cook very slowly for 10 minutes. Take off the fire and place in a pastry bag and force through the tube about 1 tablespoonful of the paste onto a buttered, floured baking sheet. Bake in a moderate oven until the puff is well browned and crisp.

Split and fill the inner portion with roselle jelly.

ROSELLE OMELET NO. 1

4 tablespoonfuls roselle jelly
4 eggs
A few pinches of salt
A few pinches of pepper

Beat the eggs, add the pepper and salt and fry with butter in a wide, flat pan, to a thin, round sheet.

Take out of the pan, spread with the roselle jelly and roll the omelet.

ROSELLE OMELET NO. 2

1 cupful roselle calyces well washed, and sliced
1 tablespoonful butter
2 eggs
1 cupful milk

Cook the roselle in a very small amount of water. Add the water, butter, and eggs and bake in a shallow pan, in a moderate oven (300° to 350°F.), until brown.

This may be served with roast pork or other meats.

ROSELLE SNOW

2 egg whites
1 cupful roselle butter

Beat the egg whites to stiffness and fold in very gradually the roselle butter.

Place in a glass dish, chill, and serve with custard cream made as follows:

1 cupful soy-bean milk
2 egg yolks
½ teaspoonful vanilla
A pinch of salt
4 tablespoonfuls sugar

Boil the milk in a double boiler. Beat the egg yolks with salt and sugar, and add the hot milk and vanilla. Mix well and return to the double boiler and cook, stirring constantly, until thick.

ROSELLE JAM TURNOVER

Make puff paste by following the recipe for puff paste.

Roll out to 1/10 inch thickness and cut to small circles, about 3 inches in diameter. Heap one side of the circle with 1 tablespoonful of roselle jam, to which has been added to small quantity of chopped pili nuts, and fold over the other side of the circle so the edges of the two sides meet. Wet the sides with cold water and press down with a fork to seal them together. Brush with egg yolk; sprinkle with sugar, and bake in a hot oven until brown and crisp.

ROSELLE-CORNMEAL FRITTERS

- 4 heaping tablespoonfuls corn meal
- 2 eggs
- ½ teaspoonful salt
- 1 tablespoonful sugar
- Lard
- 1 cupful milk

Beat the eggs well and add the milk, sugar, and salt. Then add the cornmeal and beat until a smooth batter is produced. Drop the batter, about one tablespoonful at a time, in the hot fat, and fry until crisp. Drain well, and serve with roselle preserve.

BREAD-ROSELLE PUDDING

- 2 cupfuls of stale bread cut into small pieces
- 1 small box of seedless raisins
- ½ cupful sugar
- 1 egg
- 1 cupful milk
- A pinch of nutmeg
- 3 tablespoonfuls finely chopped suet

Soak the bread in water until it becomes very soft. Squeeze dry. Beat out all the lumps with a fork, add the raisins, suet, sugar, and nutmeg and mix well. Beat the egg well and add the milk; add this to the bread mixture. Place in a deep buttered pan and cook in boiling water until done. Place the pan in an oven to brown the top, or place a small thin piece of thin or iron sheet on top and place a few red-hot pieces of charcoal over it to cook and brown the top. Serve with roselle syrup.

ROSELLE SOUFFLE NO. 1

- 1 cupful roselle butter
- ¼ cupful roselle juice
- ½ cupful flour
- 2 tablespoonfuls butter
- 2 tablespoonfuls sugar
- ¼ cupful milk
- 2 egg yolks
- 3 egg whites

Add the roselle juice to the milk. Add this to the flour previously stirred with the melted butter. Cook the mixture until it does not adhere any longer to the sides of the stew pan. Cool slightly and beat in the egg yolks, sugar, and the roselle butter. Stir slightly while adding the stiffly beaten egg whites. Place in a well-buttered pan and back slowly (40-45 minutes) in a moderate oven.

ROSELLE SOUFFLE NO. 2

- ½ cupful roselle juice
- 3 tablespoonfuls cake crumbs
- 3 tablespoonfuls bread crumbs
- 1 tablespoonful butter
- 2 eggs
- ½ cupful milk
- 2 tablespoonfuls sugar

Mix the roselle juice and milk, and bring to a boil. While hot, pour over the mixed cake and bread crumbs.

Cream the butter and sugar, add 2 egg yolks and 2 egg whites and beat well. Then add the crumbs and mix well. Bake in a moderate oven, from 25 to 30 minutes. Spread on the stiffly beaten white of egg sprinkle sugar on top, and return to the oven. Bake until the meringue browns slightly.

ROSELLE PASTE FRITTERS

1 cupful roselle paste
3 tablespoonfuls roselle juice
1 cupful flour
½ teaspoonful salt
2 tablespoonfuls sugar
2 eggs
1 teaspoonful baking powder

Sift the flour, baking powder, and salt. Beat the sugar, egg yolks, and roselle juice and add these to the flour mixture. Fold in the stiffly beaten egg whites, and lastly fold in the roselle paste, made as per recipe under roselle paste, shaped to small balls. If the batter is not thin enough it may be thinned with a small amount of roselle juice. It should be thin enough to fold in the fruit and thick enough to hold together. Drop the mixture by tablespoonfuls in hot, deep fat and fry until brown.

ROSELLE-CLARET GELATINE

To ½ cupful of claret wine add 2½ cupfuls of roselle juice, 4 tablespoonfuls sugar, and 3 tablespoonfuls of powdered gelatine. Mix, bring to a boil and continue boiling until all the gelatine is dissolved. Strain through a piece of cheesecloth and pour into a mold while hot. Chill to set. Remove from the mold and place in a jelly plate and serve immediately.

ROSELLE-ORANGE GELATINE

Dissolve ½ cupful of gelatine powder in 1⅓ cupfuls water over a gentle heat. Divide into 3 equal parts.

To one part add 1 cupful of roselle syrup and mix thoroughly; to another add 1 cupful milk and 4 tablespoonfuls sugar; and to the rest add 1 cupful of orange juice sweetened with 3 tablespoonfuls sugar and color blue with certified food coloring.

Pour the jelly solution in the mold and chill in the ice box. When solid pour on the milk solution and chill again. When it has solidified pour on the orange solution and chill once more.

Remove from the mold by dipping the mold in a pan of hot water.

ROSELLE AGAR (GULAMAN)

Dissolve 10 grams of agar in 3 cupfuls of roselle juice.

Pour in a pan and set to cool. Cut into very small cubes and place in a deep dish. Pour over this coconut milk sweetened with sugar.

ROSELLE-BANANA AGAR

Dissolve 10 grams of agar and ¼ cupful of sugar in 3 cupfuls of roselle juice. Add 1 cupful of sliced banana (saba banana boiled soft in water) and pour into a mold.

Remove from the pan and place in a deep dish.

Serve with thick coconut cream.

ROSELLE SHORTCAKE NO. 1

1 cupful flour
1 teaspoonful baking powder
¼ teaspoonful salt
1 tablespoonful sugar
⅛ cupful butter or crisco
½ cupful milk

Mix the flour, baking powder, salt, and sugar and sift twice. Work in the butter with the finger tips, and add the milk gradually. Place on a floured board; pat and roll out to ⅓ inch thickness. Place in a buttered pan and bake from 12 to 15 minutes in a hot oven. Split and place in between and on top roselle calyces cooked in 1 to 1 syrup, or roselle preserve. Cover the top with whipped cream or canned milk boiled to thickness with a very small amount of cornstarch.

ROSELLE SHORTCAKE NO. 2

1 cupful flour
2 teaspoonfuls baking powder
¼ teaspoonful salt
4 tablespoonfuls sugar
1/6 cupful butter
2 egg yolks
1/6 cupful milk

Mix the flour, baking powder, salt, and sugar, and sift twice. Work in the butter with finger tips, gradually add the egg yolks and then the milk.

Proceed as in shortcake No. 1.

ROSELLE SHORTCAKE NO. 3

1 cupful flour
2 teaspoonfuls baking powder
¼ tablespoonful sugar
3 tablespoonfuls butter
1 egg yolk
1/5 cupful milk

Mix the flour, baking powder, salt, and sugar, twice. Work in the butter with the finger tips, and add the egg yolk. Then gradually add the milk and proceed as in shortcake No. 1.

Split the cake and spread butter on each piece. Cover the bottom piece with soy-bean cream made by boiling 1 cupful of soy-bean milk, 4 tablespoonfuls sugar, and 2 egg yolks until thick.

Then cover top with roselle preserve, and place the other piece of cake on top. Cover again with soy-bean cream and then with roselle preserve.

ROSELLE JELLY PANCAKE

3 eggs
1 tablespoonful sugar
½ teaspoonful salt
1 cupful milk
½ cupful flour
1 tablespoonful butter

Beat the yolks of 3 eggs and add the sugar, salt, and ½ cupful milk. Stir in the sifted flour, and add the other half cupful of milk and the melted butter. Fold in the stiffly beaten egg whites, and bake in a shallow pan, to about 1/6 inch thickness. Spread on the roselle jelly and roll the cake. Sprinkle with sugar and burn the sugar covering the cake with a red hot iron, or a butcher knife heated to redness.

ROSELLE ROLLED CAKE

1 cupful flour
1 teaspoonful baking powder
¼ teaspoonful salt
½ cupful sugar
4 eggs
½ teaspoonful vanilla
4 tablespoonfuls milk

Sift the flour and baking powder 3 times.

Beat the egg yolks with the sugar until thick and lemon colored. Add the milk and vanilla and beat again. Gradually add the flour from the sifter and when the paste is smooth, fold in the well-beaten egg whites. Pour in a shallow, rectangular pan and bake in a moderate oven from 10 to 12 minutes.

Take out of the pan while hot and place on a clean piece of Manila paper. Spread on a thick layer of roselle jam or butter and roll the cake while hot. Set aside to cool. Cut crosswise in ¼ inch slices and serve.

JELLY-SAUCE SPICE CAKE

2 cupfuls roselle
1 cupful sugar
½ cupful butter or shortening
A few pinches each of cinnamon, nutmeg, cloves and all spice
1 egg
½ teaspoonful salt
1 ½ cupfuls flour
2 teaspoonfuls baking powder
¼ cupful chopped pili nuts

Cream the butter and sugar. Add the roselle, chopped and boiled to softness in a small amount of water, then the beaten egg.

Sift the flour, spices, salt, and baking powder twice, and add the chopped nuts. Add this to the butter and sugar mixture and mix thoroughly. Bake in 2 layers in a moderate oven (375°F.) for 20 to 25 minutes.

ROSELLE-MERINGUE SPONGE CAKE

½ cupful roselle syrup
½ cupful sugar
6 eggs
¼ teaspoonful salt
1 cupful flour

Boil the roselle syrup and sugar until it threads.

Pour little by little over the stiffly beaten egg whites, beating constantly until it cools. Then add the beaten egg yolks and salt; mix well and fold the flour into the mixture. Bake in a moderate oven for 1 hour at 300°F.

ROSELLE ANGEL CAKE

½ cupful roselle jelly
¾ cupful flour
1 cupful sugar
1 teaspoonful cream of tartar
¼ teaspoonful salt
½ teaspoonful vanilla
Whites of 8 eggs

Beat the egg whites until frothy, add the cream of tartar, and beat until stiff. Gradually add the sugar, continuing the beating, and when all the sugar is added fold in the flour mixed with salt and sifted at least 3 times. Add the vanilla, and bake in an ungreased pan for about 50 minutes. When the cake has risen and begins to brown cover it with a piece of paper to prevent burning the top. Melt the jelly and pour over the cake while hot.

ROSELLE LAYER CAKE

½ cupful roselle jam
¼ cupful finely chopped pili nuts
1 ½ cupfuls flour
1 ½ teaspoonfuls baking powder
½ teaspoonful salt
3 tablespoonfuls cornstarch
1 ½ teaspoonfuls lime juice
5 tablespoonfuls cold water
1 ½cupfuls sugar
1 teaspoonful vanilla
9 eggs

Beat the egg yolks until thick and lemon colored. Add the sugar and beat again. Then add the lime juice, water, and vanilla and mix thoroughly. Gradually add the well-sifted flour, salt, and baking powder, and lastly fold in the egg whites beaten very well but not to stiffness. Bake in 3 well-buttered layer-cake pans. Remove the cake while hot and cool in a wire basket. Place the layers one on top of another, filling between the layers with roselle jam mixed with chopped nuts.

Cover the cake with cream frosting made as follows: Cream ¼ pound of butter with 1 cupful of sugar, and add little by little while beating, ⅓ to ½ cupful of milk.

ROSELLE ICE

4 cupfuls roselle juice
(see roselle juice)
½ cupful sugar

Dissolve the sugar in the juice and strain through a piece of fine cloth. Freeze in an ice-cream freezer, or better still in a mold.

The roselle syrup may be used instead of juice, 2 cupfuls of syrup diluted with 2 cupfuls of water and frozen will make about the same ice.

ROSELLE SHERBET

1 cupful roselle jam
4 tablespoonfuls sugar
4 cupfuls milk

Mix and freeze.

ROSELLE ICE CREAM

1 cupful roselle jam
4 tablespoonfuls sugar
4 cupfuls of cream

Mix and freeze.

Chapter VI

INTRODUCTION

FISH AS FOOD

By WALLACE ADAMS

Formerly Chief, Division of Fisheries, Bureau of Science

As ordinarily used, the term fish includes, besides the fishes proper, many other water animals, as oysters, clams, and other mollusks; lobsters, crabs, prawns, and shrimps. The term "sea food" is often used to cover the whole group, or, more particularly salt-water food products as distinguished from those of fresh water. As salt-water fishes are more extensively used in the Philippines than are those of fresh water, we shall include them all under one heading.

Fish in one form or another is almost universally recognized as an important food material. In the Philippine Archipelago and in fact in practically all of the Far East it is the one item of animal food of first importance. Few people have any adequate conception of the great importance of the fisheries of the Philippines or of the immense amount of nutritive material which is every year taken from the fresh and salt waters of this country.

Of the vast quantity of fish annually caught, practically all is consumed at home and in the fresh state. In addition, large quantities of canned fish, especially sardine, salmon, and mackerel are imported for consumption. The Philippine Archipelago, comprising some 7,000 islands, with a coast line twice as great as that of the United States, and a population of approximately 12,000,000 people must necessarily depend on fish for a large part of its animal food.

Next to agriculture, the fisheries are the most important source of human food in the Philippines.

Some 1,600 species of fishes are known from Philippine waters, practically all of which are edible and of good quality. Certain species are considered better than others, a few are known to be poisonous at certain times of the year, and a small number are known to be poisonous at all times. These last mentioned are usually well known to fishermen and rarely, if ever, offered for sale. In addition to the fish as food, vast quantities of shellfish are utilized, such as clams, oysters, mussels, scallops, and snails. Lobsters, crabs, prawns, and shrimps are also used in large numbers in practically all localities where found. Many species of fishes now used in limited quantities, will, as time goes on, become more popular. This may be brought about through depletion of some of the now commonly known and generally used kinds, through improved methods of capture and transportation, or through better methods of cooking as set forth in this booklet.

The Bureau of Science, through its divisions of fisheries and food preservation, is developing the fisheries along economic lines and hopes, through this publication and others to follow, to show what fishes are generally available, how to judge their freshness and fitness for human consumption, and how to prepare them as food to suit the most fastidious taste. The market value of fish is affected by various factors; the locality from which they come, seasons in which taken, and quantity available. Due to lack of facilities for holding over fresh fish by the local dealers there are times when fish is very plentiful and consequently sells at a very low price. During the typhoon season or stormy weather when the fishermen are unable to go out, bangos is about the only fresh fish obtainable and consequently brings a high price.

For the most part fish found in the Manila markets are sold "in the round," or uncleaned and intact as taken from the water. The larger fishes, such as bonito, tuna, etc., are cleaned and cut up or sliced to meet the demand for smaller portions. The lizard fish, plaice, and some others are especially prepared, being cut into fillets or slices freed of all bones. These naturally command a higher price. Locally caught fish are not iced and are usually quite fresh when offered for sale. These are landed at Tondo every morning, except Sunday and during stormy weather, where they are sold wholesale and conveyed to the markets and other places where they are offered to the consumer.

Fish brought from a distance are iced and sometimes become stale on account of improper icing when first caught or through being handled in an unsanitary or careless manner.

Large quantities of sardines are caught but only a few are offered for sale in the fresh state, as most of them are either smoked or salted. Dalag, climbing perch, and some of the fresh-water eels are nearly always offered for sale alive, so one is certain of getting them absolutely fresh.

In the Manila markets the large fish are sold by weight, usually for ₱0.80 to ₱1.20 per kilogram. This refers more especially to the fish that is cut up and sold by the piece. Many other fish are sold in lots according to size, as one large fish, two medium-sized fish of about the same weight, or several smaller ones to equal the weight of the one large one. Shellfish are sold by the measure, usually a small can full for one centavo and up. Crabs are sold singly or in lots as are the prawns, while shrimps are sold in small piles.

Fish is prepared for the table in a variety of ways, some of which are herewith described. The proper garnishing adds much to the appearance and makes the fish seem more appetizing.

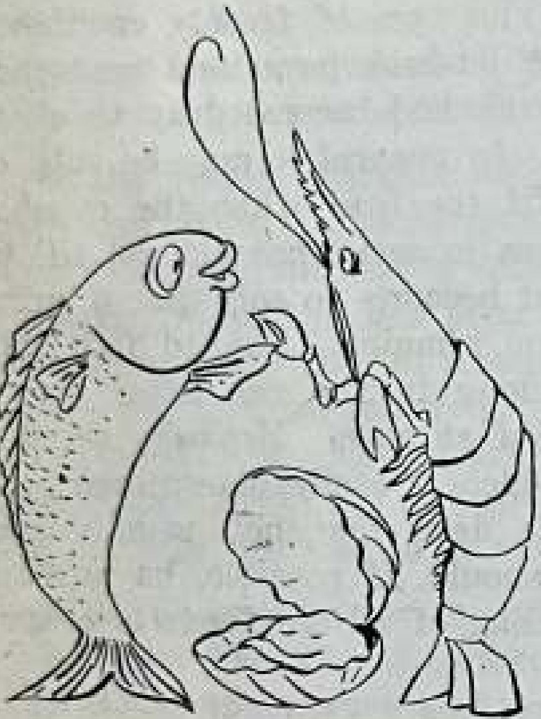
The common methods of preparing fish are boiling, steaming, broiling, frying, baking, or by combining it with other materials. Its use in soups, stews, chowders, puddings, loaves, and salads are too numerous to be mentioned here. Anyone with imagination can make innumerable recipes to suit the individual taste.

When a fish dies it stiffens almost immediately, the flesh becoming rather firm and elastic. This is a guarantee that the fish is perfectly fresh. Usually the flesh is light colored and free from blood staining in freshly caught fish. As the fish becomes stale a reddish discoloration appears, extending to the ventral portion of the backbone, and the flesh parts readily therefrom, a condition which does not normally exist.

The personal factor enters largely into the judging of the condition of the fish by its odor. Many individuals have difficulty in distinguishing between the odor of fresh fish and that of slightly tainted or stale fish, but few, if any, have trouble in discerning a putrid odor. A common method, ordinarily used, is the examination of the gills. The gills of most fish are red in color, with certain specific tints. These tints disappear as the fish becomes stale and the gills become gray and slimy if not kept at a low temperature. This test is not infallable, as frequent washing of the fish aids in the retention of the color and there are degrees of paleness even among perfectly fresh fish. The eyes of freshly caught fish are full and prominent with a jet-back pupil and transparent cornea, but they gradually shrink and become gray or clouded in color as staleness develops. In general it may be said that fish should be considered unfit for food when the eyes sink and lose their sheen, the cornea is somewhat cloudy, the gills pale or gray, or when the meat becomes so soft that if pressed with the finger the indentation remains. Canned fish should never be allowed to remain long in the can after opening, but should be removed or used at once. Mollusks should be purchased in the live state, which is easily determined by the fact that when the animal is dead the shell usually opens. Lobsters, crabs, and prawns should, if possible, be purchased alive. Cleanliness in the handling of all sea foods is of prime importance.

FISH — WE LIKE IT FRESH

By Maria Y. Orosa



Over there when they mean food they say "bread'n butter." Here we say "rice and fish." We are a fish — eating people.

The term fish includes other water animals — oysters and clams; lobsters, crabs, prawns and shrimps. Except in inland towns, far from fish streams and ponds, we cook our fish when still fresh. Now and then we get them dried and salted, or smoked or canned.

Our typical housewife can't be fooled about the condition of fish offered for sale in the markets. In spite of the remonstrations of the vendor she pokes a finger into the fish. If its flesh is firm and resilient, good. She knows well enough, that this method is not fool-proof. The vendor sometimes packs slightly stale fish in ice to stiffen, instead of packing it fresh to preserve it.

So our housewife looks her fish in the eye and examines its gills. Fresh fish has full and prominent eyes with a jet-black pupil and transparent cornea. Its gills are usually red. Not-so-fresh fish have eyes with that sunken, lack-luster, cloudy look. It's gills turn pale or gray.

Again the eye-and-gill test may not be conclusive. Some fish retain the black pupil in their eyes long after they have lost freshness. And to retain the color of the gills vendors may wash the fish frequently. And anyhow some fish have naturally pale gills. So now our housewife simply smells the fish. She may not be able to detect a slight staleness but she certainly will know a frank, putrid odor.

Our housewife, of course, does not take as long to decide whether the fish she's buying is fresh or not as we do in describing the different tests she uses. Automatically she employs one test after another. It's a joy to watch her. From long experience she has gotten the knack for determining whether fish is worth testing or not. Because sometimes she'll take one look at some fish or a pile of shrimps and know before she has touched it that the fish or shrimps are no good.

She will like to vary ways to prepare fish besides the common methods of boiling, broiling and frying. She can steam them or bake them or combine them with other foods, for attractiveness and improved taste.

FIFTY RECIPES FOR FISH AND OTHER SEA FOODS

SHRIMP-PINEAPPLE SALAD

Boil 1½ cups of shrimps in ½ cup of water and ½ teaspoon of salt. Remove the skins and cut fine.

Cut 6 pieces of canned pineapple in small pieces. Add 1 cup of sliced shrimps and 6 tablespoons of mayonnaise, and chill the mixture.

Place the mixture on a platter and smooth with a spoon. Garnish by placing 2 whole round pieces of canned pineapple on top. Place 1 medium-sized shrimp between the slices of pineapple. With cake decorator tubes squeeze different-colored mayonnaise around the pieces of pineapple to give them the appearance of butterfly wings.

FISH CHOWDER

1 cup flaked fish
1 cup sweet potatoes (previously boiled and cut in small cubes)
1 onion cut in small pieces
2 tablespoons butter
½ teaspoon pepper
4 slices bacon cut in small pieces
2 cups coconut milk diluted with an equal amount of water
5 tablespoons coconut cream
1 segment garlic
1 teaspoon salt

Boil the fish in ½ the amount of coconut milk to which is added some calamansi juice. Cool, and flake the fish, removing all bones.

Fry the bacon in butter until crisp, then the garlic until brown. Add the onion, fish, and potatoes, salt, and pepper, and continue frying 3 minutes. Add the rest of the coconut milk and let it boil 2 minutes. Add the coconut cream just before serving. Serve with crackers.

FISH SOUP

Clean the fish well and remove the skin and bones.

Chop the meat of one fish with 1 onion, 2 green onions, 1 branch of parsley, 1 slice of bread, and 1 tablespoon of flour. Add 2 well-beaten eggs and mix thoroughly.

Make into small, round balls, about the size of marbles. Wet the finger tips with lemon juice while molding the balls.

Roll in flour and fry in hot fat.

Boil the head , skin, and bones of the fish for 45 minutes, in a covered casserole, with 4 cups of water, 1 sliced onion ½ cup of white wine, 1 teaspoon of salt, 1 sliced carrot, and a pinch of pepper. Strain the soup and cool. Add the well-beaten yolks of 3 eggs and bring to a boil. Drop the fried fish balls in the soup just before serving.

(Bañgos, dalag, dalagang bukid, navajita, and other similar fishes may be used.)

HALAAN SOUP

½ cup chopped halaan
1 tablespoon chopped ham
3 tablespoons grated carrot
4 tablespoons inkama (sinkamas)
1 egg
½ medium-sized onion, sliced
2 cups clam soup
½ cup milk
2 tablespoons butter
1 teaspoon salt
Pinches pepper

Fry the onion in butter until partially cooked; add the clams, ham, the clam soup, and the milk with the beaten egg. Boil 10 minutes. Add the carrot and inkama and continue boiling until the vegetables are tender. Serve hot.

BAR GLACE A LA VLADIMIR (PLAT FROID)

Clean the fish well and place on a rack in an upright position. Put a rolled towel on each side and tie the fish and towel to the rack to keep the fish in position.

Place the rack in a pan containing a boiling mixture of 1 cup of vinegar, 1 cup of white wine, 1 teaspoon salt, a few parsley leaves, 1 small carrot cut into small pieces, 1 sliced onion, and 1 laurel leaf.

When the fish is cooked remove from the fire and cool. Drain the fish and remove the skin.

Place the fish on a platter with the back up and cover with 1 cup mayonnaise dressing to which has been added 2 sheets of gelatine dissolved in a small amount of hot water. Place the fish in the ice box. When the dressing hardens transfer the fish to a platter containing a mound of boiled rice in the form of a cake, 2 inches high and a little longer and wider than the fish.

Place the fish back upward on the rice cake and garnish with thin half slices of lemon and with 4 hard-boiled eggs prepared as follows:

Cut the hard-boiled eggs lengthwise in halves. Remove the yolks and add to them 3 tablespoons mayonnaise. Divide the mixture into 2 equal parts. To one part add 2 tablespoons of tomato sauce, and seasoning. To the other part add 2 tablespoons of spinach pulped and passed through a fine sieve and seasoned to taste. Fill the egg whites with the fillers (tomato sauce and spinach sauce), and arrange alternately around the platter with sliced lemon.

FISH WITH VINEGAR SAUCE

Clean the fish well. Wrap in banana leaves and tie at the ends. Boil in the following mixture for 40 minutes:

4 cups water
2 tablespoon olive or Wesson oil Wesson)
⅛ teaspoon black pepper
2 sliced tomatoes
1 large onion, sliced
2 tablespoons vinegar

Drain the fish and unwrap it. Lay on a platter and pour over it the vinegar sauce made as follows:

Chop into very fine pieces the yolks of 2 hard-boiled eggs and smooth to a thin paste with 8 tablespoons of Wesson oil and 2 tablespoons of vinegar. To this add:

1 sweet red pepper, roasted, peeled, and chopped into
1 ripe tomato, roasted, peeled, seeds removed, and chop-

fine pieces
4 green onions (with leaves), finely cut crosswise
Whites of 2 hard-boiled eggs, finely chopped
ped into fine pieces
1 small onion, finely chopped and worked with salt, rinsed, and drained

Mix thoroughly.

(This recipe may be used for either lapu-lapu, tanguingui, apahap, talakitok, bakoko, or pampano.)

FISH WITH GREEN SAUCE

Clean the fish, sprinkle with 1 tablespoon of salt, and let it stand for 15 minutes.

Drain, place it in a pan containing 2 cups of water, 1 sliced onion, 2 ripe tomatoes, halved, 1 teaspoon of salt, and a pinch of pepper. Boil 30 minutes.

Strain the soup left and make gravy from it by the addition of 1 tablespoon of flour. Season with salt and pepper and boil until thick. The gravy may be colored green by adding kinchay, or green onion juice to it.

FISH CURRY AND SAUCE

1 teaspoon flour
1 teaspoon curry powder
1 teaspoon lemon juice
2 tablespoons butter
1 tablespoon minced onion
¼ cup coconut milk
1¼ cups water
1 teaspoon salt
Pinch black pepper

Boil the fish for 5 minutes in ½ cup of water, ½ teaspoon of salt, and a pinch of pepper. Drain and lay aside.

Fry the onion in butter and add the water in which is dissolved 1 teaspoon of flour. Boil 2 minutes. Add the curry powder, lemon juice, salt, and fish; boil 10 minutes, or until the gravy thickens. Add the coconut milk to which is added ¼ cup of water and continue boiling 3 minutes. Lay the fish on a platter, pour the gravy over it, and arrange mounds of boiled rice on either side.

(Use either bakoko, apahap, lapu-lapu, talakitok, or maya-maya.)

LAPU-LAPU WITH VEGETABLE

Boil or steam the fish.

Lay the fish on a platter and cover it with a sauce made as follows:

In 2 tablespoons of butter brown 1 tablespoon of flour, ½ teaspoon of salt, and a pinch of pepper. Add 2 cups of chicken broth in which the yolks of 3 hard-boiled eggs are ground, and heat until thick.

Garnish the fish by covering it with sweet pickles, boiled carrots, and the whites of 3 hard-boiled eggs, all finely chopped and laid alternately side by side in diagonal lines across the fish.

(This recipe is suitable for any fish mentioned under Recipe No. 1.)

FISH WITH CHEESE

Clean the fish well and sprinkle with 1 tablespoon of salt. Let it stand 15 minutes. Drain the fish well, spread over it 2 tablespoons of butter and 5 tablespoons of grated cheese. Lay it in a baking pan containing 2 tomatoes and 1 onion, each quartered, and 3 cups of chicken broth.

Place the pan in a moderate oven, and bake about 35 minutes, basting the fish every few minutes to prevent burning.

Make a cheese gravy by browning 2 tablespoons of flour in 3 tablespoons of butter, add the remaining broth, and heat until thick. To this add 2 tablespoons of grated cheese. Pour the mixture over the fish.

Garnish with either asparagus or artichoke.

BIA WITH COCONUT MILK

Clean the bia, boil it slowly for about 15 minutes in 1 cup of coconut milk, ½ teaspoon of salt, and the juice of 5 calamansi.

Lay the fish on a platter and pour over it a gravy made from the stock in which it was cooked and boiled thick with one tablespoon of flour.

(Bia is the most suitable fish for this recipe. However, other fishes may also be used.)

FISH WITH SABA BANANA

Clean the fish, sprinkle with salt, and lay aside for 10 minutes.

Wrap in banana leaves and boil for 30 minutes in the following mixture:

4 cups water
3 sliced tomatoes
1 teaspoon salt
A few pinches black pepper
1 sliced onion

Drain, unwrap, place on a platter, and cover with mayonnaise dressing.

Garnish with boiled ripe saba bananas, cut lengthwise in ¼-inch slices.

TOCHO

- 1 bañgos
- 2 tablespoons ginger cut into very thin, narrow strips about ¾ inch long
- 2 sections garlic, finely chopped
- 6 fair-sized tomatoes or 4 large tomatoes, minced
- 2 tablespoons tahuri
- 2 tablespoons tausi
- 1 onion sliced in long, narrow strips
- 1 cake toqua, cut into pieces ¾ inch long and ⅛ inch wide

Clean the fish and cut in pieces ½ inch thick. Salt and let stand 15 minutes. Drain and wipe dry with a clean towel. Fry in hot lard until brown and lay aside.

Saute' the onion and the toqua and lay aside.

Saute' the garlic, ginger, and tomatoes. Add to this the tahuri dissolved in 1 cup of water, then the tausi, and the fried toqua and onion. Boil 5 minutes. Add 2 tablespoons of vinegar and boil 5 minutes longer. Drop the fried fish into this mixture and continue boiling 10 minutes.

(Bañgos is the fish most commonly used for this recipe, although other fishes are sometimes used.)

ESCABECHE (MACAO)

- 1 medium-sized fish (either lapu-lapu, pampano, apahap, or talakitok)
- 1 large onion
- 2 sections garlic, cut into small pieces
- 1 large red sweet pepper, cut into long, narrow pieces
- 2 tablespoons flour
- 2 cups water or white stock
- 4 tablespoons vinegar
- 4 tablespoons sugar
- 3 tablespoons toyo sauce
- 2 fair-sized Irish potatoes, cut in very narrow strips 1¼ inches long

Clean the fish, sprinkle with 1 teaspoon salt. Let stand 10 minutes. Drain and dry with a towel. Fry in lard until brown and lay aside.

Fry the garlic, onion, and sweet pepper in lard.

Make a medium-thick gravy from a mixture of water, vinegar, sugar, toyo, and flour; add the fried garlic, onion, sweet pepper, and fish; boil 5 minutes.

Place the fish on a platter, pour the gravy over it, and garnish with the potatoes fried crisp in deep fat.

MOLE

- 1 medium-sized dalag
- 2 tablespoons patis
- 2 tablespoons roasted and powdered rice
- 1 tablespoon achuete seeds
- 4 tablespoons lard
- ¼ cup roasted peanuts, chopped very fine
- 2 sections garlic, minced
- 2 pinches black pepper
- 2 cups water

Soak the achuete seeds in 2 cups of water for about 15 minutes. Rub the seeds together and strain the liquid.

Clean the fish, cut into 4 or 5 pieces, and drain well.

Sauté the garlic until brown. Add the fish and patis at the same time. Cover the frying pan and cook 5 minutes. Add the powdered rice and finely chopped peanuts, previously mixed and moistened with 1 cup of achuete water. Cook 2 minutes longer. Then add the remaining achuete water and boil until the gravy thickens.

STUFFED BAÑGOS

- 1 bañgos
- 3 finely chopped tomatoes
- 3 potatoes, cut into small cubes and fried
- 2 sections garlic, chopped very fine
- 1 teaspoon salt
- 1 small can peas
- 1 finely chopped onion

Clean the fish, taking care not to cut the skin. Roll the fish on the table, pressing on it to soften the meat. Carefully remove the meat and backbone with the aid of a dull table knife. The skin must remain unbroken. Boil the meat in a small quantity of water to which 2 pinches of salt have been added. Flake and remove all bones. Sauté the garlic, tomatoes, and onions. Add the flaked fish and cook for 5 minutes. Place the cooked mixture in a bowl. Add to it 1 tablespoon of butter, the peas well drained from their liquor, the previously fried potatoes, the well-beaten yolks of 3 eggs. Mix very thoroughly. Stuff the fish with this mixture and fry in very hot deep fat until brown, or bake in a moderate oven.

FISH FILLETS

Clean two soles and fillet. Sprinkle with salt and pepper.

Boil the heads and bones of the fish for 30 minutes in 2 cups of water, 1 sliced onion, 1 cup white wine, 1 tablespoon butter, and a small amount each of thyme, parsley, salt, and pepper. Strain the soup.

Bake the fillets for about 30 minutes in a pan containing 2 tablespoons butter and 1 cup of the soup. Drain, put the fillets on a platter, and add the drippings to the first soup.

Brown 1 tablespoon of flour in 1 tablespoon of butter. Then add all the soup gradually, stirring constantly. Boil until somewhat thick. Cool, and add the well-beaten yolks of 2 eggs, 2 tablespoons of butter, and cook again about 10 minutes. Pour this on the fillets.

Garnish with half-moon-shaped slices of bread dipped first in lightly beaten eggs, then in bread crumbs and fried until crisp.

STUFFED FISH FILLETS

1 cup flaked fish
1 teaspoon bread crumbs
1 tablespoon cream
1 egg
1 tablespoon melted butter
Pepper and salt to taste
Grated lemon rind

Chop the fish and bread crumbs, add the pepper, salt, 2 pinches of grated lemon rind, melted butter, and the egg and cream previously beaten together. Mix thoroughly.

Roll the fillets and tie each with a piece of string to keep it rolled. Place in a greased pan with a small amount of broth made by boiling the heads, bones, and skin in water to which have been added tomato, onions, and salt. Bake in a moderate oven about 30 minutes, basting from time to time to prevent burning.

Remove the strings and roll in cracker crumbs. Pour over each ½ teaspoon of melted butter, and serve with sauce made as follows:

1 tablespoon butter
1 tablespoon flour
½ pint milk
A pinch each white pepper and salt
½ teaspoon lemon juice
1 teaspoon chopped parsley

Brown the flour in butter, add the milk, lemon juice, salt, and pepper, and cook until the gravy thickens. Add the chopped parsley just before removing from the fire.

FISH CROQUETTES

- 1 cup flaked fish
- 2 sections garlic, finely chopped
- ½ onion, finely chopped
- ¾ cup milk
- 1½ teaspoons salt
- 2 tablespoons chopped green onions
- 2 tablespoons butter
- 10 small potatoes boiled, peeled, and mashed
- 2 eggs
- 6 tablespoons bread crumbs
- 1 pinch black pepper
- 1 tablespoon flour

Saute the garlic and onion in 2 tablespoons of lard. Add the fish, salt and black pepper, and cook for 5 minutes. Add the butter and green onion and mix well. Make oval croquettes with the mashed potatoes. Roll in lightly beaten eggs and then in bread crumbs. Roll again in the eggs and bread crumbs and fry in hot lard until brown.

(Dalagang bukid, navajita, and other fishes may be used for this recipe.)

PASTELITOS DE PESCADO

- 2 cups flour
- 12 tablespoons butter
- 1 tablespoon sugar
- 1 teaspoon salt
- 4 eggs

Sift the flour, salt, and sugar. Work in the butter with tips of the fingers and fold in the well-beaten yolks of 4 eggs.

Sprinkle with enough cold water to bring the mass together, and work very lightly with the fingers. Place the dough on a floured board and roll out to a sheet about ⅛ inch thick. Cut into 2 equal parts. On one part spread evenly the filler, made as follows:

- 1 onion, chopped fine
- 2 tomatoes, roasted, skins and seeds removed, and minced
- 3 Vienna sausages, chopped fine
- 4 tablespoons grated cheese
- 4 tablespoons chopped ham
- 2 cups flaked fish

Fry the onion and tomato in butter. Add the fish, sausage, and ham, and fry 3 minutes longer. Then add the grated cheese.

Cover with the other sheet of dough rolled out to ⅛ inch thick, and press gently with a rolling pin. Cut in rectangles 3 inches long and 1 inch wide.

Place in a buttered and floured pan; brush with lightly beaten yolks of eggs, and bake in a moderate oven until brown.

FISH PIE No. 1

- 2 cups flour
- 9 tablespoons butter
- ½ teaspoon salt
- 1 tablespoon sugar

Sift the flour, sugar, and salt. Mix in the butter with the aid of a fork until the mixture becomes mealy. Gradually add cold water until the dough clings together. Chill, and divide into two parts.

Roll out one part about ½ inch thick, on a floured board, transfer to a buttered pie pan and bake in a hot oven about 7 minutes.

Fill with the following filler.

- 8 tablespoons butter
- 1 small onion, chopped fine
- 2 medium-sized tomatoes
- 2 medium-sized Irish potatoes
- 1 cup mushrooms
- 2 cups flaked fish (lapu-lapu)
- 1 cup water chestnuts (apulid), cut in small cubes

Boil the fish in water, salt, and a pinch of pepper. Flake and remove all bones. Soak the dried mushrooms in water until soft.

Fry the onions and tomatoes in butter. Add the apulid, mushrooms, fish, water chesnuts, the potatoes cut in small cubes and fried, a pinch of salt, and ½ cup white sauce.

Roll out the remaining dough to ½ inch thick, and use this as the top crust. Bake in a hot oven about 20 minutes.

FISH PIE No. 2

Prepare the dough in the same manner as in fish pie No. 1.

Line muffin pans with this dough, rolled to ½ inch thickness. Bake until brown.

Fill with the following filler:

- 2 cups flaked fish previously boiled in water containing salt, pepper, 1 sliced tomato
- 6 tablespoons chopped sweet sour pickles
- 1 pint pastry cream

Mix the above.

Roll out the remaining dough ½ inch thick and use as the top crust. Bake in a hot oven for about 10 minutes.

FISH TIMBALE

- 1 cup flaked fish
- ½ cup boiled mushrooms
- 8 tablespoons butter
- 1 teaspoon salt

1 cup bread crumbs
4 eggs
A pinch each pepper and nutmeg
2 cups milk

Use any good fish, such as lapu-lapu, pampano, talakitok, mayamaya, or bakoko. Remove the bones and skin. Flake. Pound the meat and mushrooms to a fine paste. Pass through a sieve.

Cook the bread crumbs for 10 minutes in the milk. Remove from the fire and add the fish paste, melted butter, salt, pepper, and nutmeg, and mix thoroughly. Add the well-beaten eggs and place the mixture in a buttered mold. Cover the mold with oiled paper, set in a deep baking pan containing hot water. Place in a moderate oven and bake for three-quarters of an hour.

Serve with tomato sauce.

FISH CUSTARD

1½ cups milk
4 eggs
½ cup flaked fish
¾ cup boiled, sliced shrimp
4 tablespoons finely cut green onions
½ teaspoon salt
1 pinch black pepper
3 tablespoons chopped ham

Boil the fish and shrimp in a small amount of water with ½ teaspoon of salt and a pinch of black pepper.

Flake the fish and remove the bones. Clean the shrimps and slice into small pieces. Mix the fish and shrimp and add to the mixture the finely cut onions and chopped ham.

Beat the eggs well and mix thoroughly with the milk. Dissolve in this mixture 2 tablespoons of corn starch and add this to the fish mixture.

Transfer to a buttered mold and bake in a moderate oven until brown.

(Any fish may be used for this recipe.)

FISH-CHEESE PUDDING

1 cup flaked fish
2 cups coconut milk
4 tablespoons grated cheese
1 pinch pepper
1 cup boiled rice
3 eggs
1 teaspoon salt
2 tablespoons butter

Boil the fish in 1 cup of coconut milk. Flake, remove all bones, and add the butter.

Add the well-beaten yolks of eggs to 1 cup of coconut milk, then the boiled rice, the flaked fish, grated cheese, salt, and pepper. Fold in the stiffly beaten whites of 3 eggs.

Pour the mixture in a buttered mold and bake in a pan of hot water, in a moderate oven, for about 30 minutes.

FISH LOAF No. 1

1 cup flaked fish
2 minced sweet red pepper
2 cups coconut milk
A pinch each pepper and nutmeg
1 small onion
½ cup chopped suet
½ cup bread crumbs
1 teaspoon salt
3 eggs

Cook the bread crumbs to a thick paste with 1 cup of coconut milk.

Boil the fish in 1 cup of coconut milk, flake, and remove all bones.

Fry the onion and fish. Season with salt, pepper, and nutmeg. Add the sweet red pepper, and cook 1 minute longer. Remove from the fire, add the paste, the minced suet, the well-beaten yolks of 3 eggs. Lastly fold in the stiffly whipped whites of 3 eggs. Transfer to a buttered bread pan and bake in a moderate oven until brown. (About 30 minutes.)

FISH LOAF No. 2

½ cup flaked fish
1 chopped sweet red pepper
¾ tablespoon salt
½ cup bread rcumbs
1 cup coconut milk
3 eggs
1 cup milk
1 tablespoon lemon juice
2 pinches paprika

Boil the fish in 1 cup of coconut milk and 1 teaspoon of salt. Flake and remove the bones. Add the bread crumbs, lemon juice, ¼ teaspoon salt, paprika, sweet red pepper, and the mixed well-beaten eggs and milk. Transfer to a buttered bread mold and bake 30 minutes in a moderate oven.

FISH SPREAD

1 medium-sized bañgos, dalagang bukid, or navajita
2 cups coconut milk
Juice of 6 calamansi
¾ tablespoon salt
Yolks of 2 eggs
¼ cups coconut cream
2 tablespoons white wine
Pinch nutmeg
Pinch pepper

Boil the fish in coconut milk to which has been added the calamansi juice, 1 teaspoon of salt, and a pinch of pepper. Flake and remove all bones. Add 2 tablespoons white wine, a pinch of nutmeg, and cook 1 minute longer.

Add the 2 well-beaten egg yolks to the coconut cream and add this to the fish mixture. Cook until the mixture thickens.

Serve with a small amount of paprika on slices of toast, crackers, or biscuits.

BUYABES

1 onion cut in small pieces
1 section garlic, chopped
3 leaves green onions, cut
2 tablespoons olive oil
A few parsley leaves
1 laurel leaf
1 celery leaf
Thyme

1 cup white wine
8 ounces tomato puree
4 cups water
1 gram saffron
2 cups mollusk
1 fish
1 teaspoon salt
⅛ teaspoon pepper

Fry the onion in the oil. Add the garlic, a few parsley leaves, 1 laurel leaf, a celery leaf, a small amount of thyme, and continue frying until the garlic is brown. Add 1 cup of white wine, 8 ounces of tomato puree, 4 cups water, salt, and pepper, and cook 5 minutes. Add 1 gram of saffron and boil 10 minutes; then the mollusks, previously cleaned and boiled in water until they opened, the fish, previously cleaned and cut in pieces ½ inch thick, and boil again for 15 minutes. Lastly,

Garnish with bread cut in small triangles and fry in oil until crisp.

(For mollusk use tulya, tekhan, halaang babae, or paros. For fish use lapu-lapu, mayamaya, pampano, bia, or bakoko.)

CHOW MIN

1 pound Chinese noodles
¾ cup sliced onions
½ cup pork, cut in thin, narrow slices 1½ inches long
1 cup shrimps, sliced in long narrow pieces

1 egg
2 tablespoons lard
1 teaspoon cornstarch
1½ cups chicken broth
1 teaspoon salt
Oil

Beat the egg and pour in a hot oiled pan. Run all over the surface of the pan and cook 1 minute. Cut in very narrow pieces, 1½ inches long.

Mix the lard and noodles and steam for ½ hour. Separate the noodles and fry in hot oil until brown. Place in a platter.

Season and fry the onions, pork, and shrimps.

Make a medium-thick gravy from the chicken broth, toyo, cornstarch, salt, and pepper. Add the fried onions, shrimps, and pork, and pour the mixture over the fried noodles. Garnish with the fried eggs cut in long, narrow threads.

GOLDEN SHRIMP

Boil 20 medium-sized shrimps in a small quantity of water seasoned with salt and pepper.

Remove the heads and skins but not the tails.

Beat 4 eggs with 2 tablespoons of flour, a pinch each of salt and pepper. Dip the shrimps in the egg mixture. Fry in hot deep fat until brown.

Serve with sweet-sour sauce. See directions for making in Recipe No. 12.

STUFFED SHRIMPS

30 medium-sized shrimps
6 tablespoons chopped pork
1 section garlic, chopped fine
1 tablespoon minced onion
2 tablespoons chopped tomatoes
2 tablespoons minced mushrooms
3 tablespoons water chestnut, cut fine
1 tablespoon salt
1 tablespoon flour
1 tablespoon finely cut onion leaves
2 tablespoons lard
2 eggs

Blanch the shrimps in boiling water. Remove the shells from 20, leaving the heads and tails intact. Make a deep cut at the center of the back, in a straight line, from the head to the tail. Sprinkle with a pinch of pepper, salt, and a few drops of lemon juice.

Fry the garlic, onion, and tomatoes in lard. Add the 10 remaining cleaned shrimps mixed with the pork and chopped fine, also the mushrooms and water chestnuts. Cook 5 minutes longer. Add the green onions and mix thoroughly.

Stuff the shrimps with the above mixture, wrap in a piece of omentum (unto sin sal), dip in 2 well-beaten eggs with 1 tablespoon flour, and fry in hot, deep fat until brown.

Serve with sweet-sour sauce made as follows:

½ cup vinegar
½ cup water
2 tablespoons sugar
1 teaspoon salt
2 tablespoons cornstarch
2 tablespoons toyo sauce

Mix the above ingredients and cook until the gravy thickens.

SHRIMP-AND-CRAB CAKE

1 cup boiled sliced shrimps
1 tablespoon salt

1 cup boiled and flaked crabs
2 tablespoons butter
1½ cups milk
Yolks of 2 eggs
1 tablespoon chopped parsley
A few pinches pepper
A pinch nutmeg
1 teaspoon flour

Melt the butter in a sauce pan. Add the shrimps, crabs, salt, nutmeg, pepper, and parsley, then the milk previously mixed with flour and well-beaten yolks of 3 eggs.

Place in a buttered pan and bake in a moderate oven for 25 minutes.

Cool and cut in desired pieces. Fry in hot fat until brown. Serve hot.

CRAB-SHRIMP SHORT CAKE

Boil the shrimps and crabs in a small quantity of water with salt.

Cool, flake the crabs and slice the shrimps.

Fry for 5 minutes 3 tablespoons chopped onions and ½ cup each of the flaked crabs and sliced shrimps.

Brown 2 tablespoons of seasoned flour in 2 tablespoons butter. Add gradually 2 cups of milk, stirring constantly. Boil to a thick gravy.

Make tea biscuits according to the following directions:

2 cups flour
Yolks of 2 eggs
Milk
1 tablespoon sugar
½ teaspoon salt
4 tablespoons butter
4 teaspoons baking powder

Sift the flour, baking powder, salt, and sugar, and work in the butter with the tips of the fingers.

Beat the eggs and add enough milk to bring the total volume to ¾ cup. Add this to the flour mixture and knead very lightly.

Place on a floured board and roll out to ½ inch in thickness. Cut with a biscuit cutter and bake for 12 minutes in a hot oven (450°). Split the biscuits and fill with the shrimp-crab mixture, place on a platter, and pour the gravy over them just before serving.

STUFFED CRAB No. 1

1 cup boiled, flaked crabs
½ cup bread crumbs
1½ cups milk
A pinch each pepperand cinnamon
2 tablespoons grated cheese

3 eggs
1 teaspoon salt
2 tablespoons butter
¼ cup suet

Boil the crabs in a few tablespoons of water and a small amount of salt. Flake.

Cook the bread crumbs in milk, add the butter, cheese, and flaked crabs, pepper, cinnamon, suet, and the 2 well-beaten eggs. Stuff the crab shells and brush the top with lightly beaten egg yolks. Bake about 20 minutes. Serve hot.

STUFFED CRAB No. 2

1 cup flaked crab
1 chopped onion
1 chopped tomato
1 section garlic, chopped fine
1 minced sweet red pepper
1 teaspoon salt
2 eggs
1 pinch pepper

Fry the garlic, onion, and tomato. Add the flaked crab, salt, pepper, sweet red pepper, and continue frying 5 minutes. Cool. Add the well-beaten eggs and stuff the crab shells with this mixture. Fry in hot fat until brown.

KEKIAM

1 cup ground pork
1 cup ground pork fat
1 cup ground shrimps
4 eggs, well beaten
¼ cup green onion leaves, chopped fine
½ cup flour
¾ tablespoon salt

Mix the above ingredients and wrap in a piece of omentum (unto sin sal) to form a cylinder about 1½ inches in diameter. Steam for about 30 minutes. Cool, and slice crosswise to about the thickness of a 50-centavo piece, and fry in hot lard until brown.

Serve with vinegar to which has been added the chopped onions, a small amount of salt, a pinch of pepper, and a small amount of sugar.

CHOP-SUEY No. 1

1 cup flaked boiled chicken
1 cup boiled sliced shrimps
6 tablespoons sliced Chinese ham
½ cup boiled and sliced chicken livers and gizzards
2 Chinese sausages
½ cup mushrooms
⅓ cup sliced pork
1 pig's kidney, boiled and sliced
1 teaspoon salt
3 cups cabbage, cut in pieces 1 inch long and ½ inch wide
1 cup sliced patola
6 tablespoons toyo
1 tablespoon flour
2 tablespoons chopped garlic
3 sliced onions
2 cups chicken broth
1 cup ham broth
¼ teaspoon pepper

Fry the garlic, onions, pork, shrimps, chicken, ham, sausages, livers, gizzards, kidney, and mushrooms together; then add the toyo, salt, pepper, and shrimp broth. Boil 5 minutes. Add the cabbage, boil 5 minutes longer; then the patola, and lastly the ham soup mixed with flour. Boil until the vegetables are tender. Stir while boiling to prevent burning.

Place in a deep dish and garnish with parsley leaves.

CHOP-SUEY No. 2

- 1 cup flaked boiled chicken
- 1 cup sliced boiled shrimps
- 6 tablespoons sliced Chinese ham
- 2 Chinese sausages
- ½ cup mushrooms
- ½ cup sliced pork
- 1 pig's kidney
- 2 each boiled and sliced chicken gizzards and livers
- 6 tablespoons toyo
- 1 cup sliced celery
- 1 cup sprouted mongo (taugui)
- 1 sliced carrot
- 1 cup cabbage, cut in pieces ½ inch long and ½ inch wide
- 3 sliced onions
- 1 teaspoon salt
- 1 tablespoon flour
- ¼ teaspoon pepper
- 2 cups chicken broth
- 1 cup ham broth

Proceed as in chop-suey No. 1.

LUMPIA No. 1

- 1 cup shrimps, boiled, peeled, and cut fine
- 1 cup pork, boiled and sliced fine
- 1 cup string beans, blanched ½ inch long and cut in narrow pieces
- 2¼ cups grated green papaya
- 1¾ cups grated inkama (sinkamas)
- ¼ cup toyo sauce
- 4 tablespoons sugar
- 1½ teaspoons salt
- 2 cups shrimp soup
- 2 sections garlic, chopped fine
- 1 onion, sliced fine

Boil the shrimps and pork in 2½ cups of water.

Fry the garlic and onion in lard, then the shrimps and pork. Add the toyo sauce, the shrimp broth (made by pounding the heads and tails of the shrimps, boiling them in the water in which they were cooked, and straining the soup), string beans, papaya previously worked with salt, washed and pressed to remove the water, sinkamas, salt, and sugar. Boil until the papaya and sinkamas are tender.

Remove from the fire and wrap about 2 tablespoons of the mixture in lumpia wrappings.

Spread on top of each a small quantity of pounded garlic and 1 teaspoon of lumpia sauce before serving. The sauce is made as follows:

- ½ cup toyo sauce
- 1½ cups water
- ⅓ cup sugar
- 4 tablespoons flour

Mix the toyo, water, sugar, and flour and boil to a thick gravy. Stir constantly while cooking to prevent lumping.

LUMPIA WITH COCONUT MILK (No. 2)

- 2 cups gabi stalks, cut ½ inch long
- 1 cup pork, boiled and sliced fine
- 1 cup shrimps, boiled and sliced fine
- 1½ teaspoons salt
- 2 cups coconut milk
- 2 sections chopped garlic
- 1 minced onion
- Juice of 8 calamansi

Boil the pork and shrimps in 2 cups of coconut milk and 1 teaspoon salt. Save the soup, and cut the pork and shrimps into fine pieces.

Fry the garlic and onion, then the shrimps and pork. Add the gabi stalks which have previously been peeled, cut, and boiled in three changes of water and then boiled in the coconut milk in which the pork and shrimps were cooked. This is acidified with calamansi juice. Add ½ cup coconut milk and boil 10 minutes. Wrap in lumpia wrappings, and serve with finely chopped garlic and lumpia sauce. See lumpia No. 1.

SPAGHETTI NEST

Boil one package of spaghetti until tender in water containing salt and pepper. Drain well, add 4 tablespoons of grated cheese and 6 tablespoons of chicken broth and bake for 5 minutes in a moderate oven.

Boil a small fish in 1 cup of water containing 1 teaspoon salt, a pinch of pepper, ½ sliced onion, and 1 sliced tomato. Flake and remove all bones.

Cook ¼ cup bread crumbs in ½ cup coconut milk. Add ½ cup flaked fish, 1 minced sweet pepper, and 1 well-beaten egg. Form into small egg-shaped croquettes, roll in lightly beaten egg, then in bread crumbs, and fry until brown.

Arrange the spaghetti on a platter in the form of small nests and place 2 egg-shaped croquettes in each before serving.

Serve with tomato sauce or catchup.

FRIED-FISH NOODLES

1 cup uncooked flaked fish
¼ cup flaked crabs or shrimps
1 tablespoon minced onion
2 pinches black pepper
1 teaspoon salt
2 cups flour
Yolks of 2 eggs
½ cup crab soup made by pounding the legs of the crabs and adding to this a small quantity of water and salt, boiling 5 minutes, and straining the soup through a piece of cloth

Pound the flaked crabs and fish together in a mortar until a very smooth paste is formed.

Mix the butter and flour thoroughly and add the yolks of 2 eggs. Add this to the pounded fish-crab mixture and knead, adding a small portion of the crab soup from time to time as needed, until the dough is smooth and elastic to the touch.

Place the dough on a floured board and roll to a very thin sheet. Cut in long, narrow pieces about -½ inches long and 1½ inches wide. Fry in hot fat until brown and crisp.

Serve with sweet-sour sauce made as follows:

2 tablespoons butter
2 tablespoons sugar
1 teaspoon salt
2 tablespoons flour
2 cups white stock or water
2 tablespoons butter
4 tablespoons sugar
4 tablespoons vinegar
¼ teaspoon black pepper

Brown the flour in butter and pour in the white stock gradually, stirring constantly. Add the vinegar, sugar, salt, and pepper, and cook until thick. Stir while cooking to prevent lumping.

PANSIT MOLO

2 cups flour
Yolks 3 eggs
¼ teaspoon salt
¼ cup water

Sift the flour and salt, add the yolks of 3 eggs, and knead with the fingers. Add the water and work until the dough becomes very smooth and fine. Roll out on a floured board to a thin sheet about the thickness of paper. Cut in small triangular pieces.

Prepare the following:

1 cup ground pork
5 tablespoons toyo
Yolks 2 eggs
2 tablespoons chopped kusay (Chinese leek)
Pinch pepper

Mix the above ingredients and wrap in the dough, pressing the sides to seal them together, and to keep the stuffing in. Lay aside.

Prepare the soup as follows:

1 boiled chicken, cut in small pieces
1½ cups boiled, sliced shrimps
2 tablespoons chopped garlic
8 tablespoons toyo
1 tablespoon salt
5 cups shrimp soup
10 cups chicken soup
½ cup chopped kusay (Chinese leek)

Fry the garlic, onion, and shrimp. Add the chicken and fry about 8 minutes. Add the toyo and cook a few minutes longer. Then add the shrimp soup and chicken soup, and boil very slowly for about 1 hour.

When ready to serve drop the mixture wrapped in the dough in the soup and boil for 5 minutes. Serve hot.

PANSIT GUISADO

1 cup flaked boiled chicken
1 cup sliced pork
¾ cup sliced boiled shrimps
⅔ cup Chinese sausages
1 cup cabbage, cut in long narrow pieces
1 cup patola
3 tablespoons toyo
4 tablespoons Chinese ham, shredded
1 teaspoon salt
1 cup shrimp soup
1½ cups ham soup
1 tablespoon flour
6 cakes of mique (Chinese noodle)
2 tablespoons chopped garlic
1 sliced onion
Pinch pepper

Slice the pork, shrimps, and Chinese sausages in long narrow pieces.

Fry separately the garlic, onion, shrimps, pork, chicken, ham, and Chinese sausages. Lay a small portion of each aside for garnishing the dish. Mix the rest and add the toyo, salt, and pepper. Fry again for about 1 minute. Add the previously boiled shrimp soup, stirring constantly, then the flour mixed with a small amount of the soup, cabbage, patola, and ham soup. Boil until about dry. Add the mique, previously blanched in boiling water and fried 3 minutes in a small quantity of lard, and mix thoroughly.

Arrange on a platter and garnish with the fried garlic, onions, pork, chicken, shrimps, ham, and Chinese sausages. Sliced lemon and parsley leaves will also improve the appearance of the dish.

COUNTRY PANSIT

1 cup shredded dried fish
1 cup fresh banana flowers, chopped fine
2 segments garlic
2 cups sotangjon (white noodles made of rice) soaked in water for about 10 minutes
½ cup shrimps, boiled and sliced
½ sliced onion
2 sliced ripe tomatoes
4 leaves green onions
2 cups shrimp soup
1 teaspoon salt
A few pinches black pepper

Fry the garlic, onion, tomatoes, dried fish, shrimps, and the banana flowers. Add the sotangjon, the shrimp soup, salt and pepper, and boil 10 minutes.

Place in a deep dish and garnish with minced green onion leaves.

PANSIT WITH SOUP

2 tablespoons chopped garlic
1 sliced onion
A pinch of pepper
1 teaspoon salt
1 cup flaked boiled chicken
1 cup pork, sliced fine
¾ cup sliced boiled shrimps
⅔ cup Chinese sausages, sliced in long, narrow pieces
6 cakes of mique (Chinese noodle)
1 cup cabbage, sliced in long, narrow pieces
1 cup patola, sliced in small pieces
3 tablespoons shredded Chinese ham
2 cups shrimp soup (made as in previous recipes)
1½ cups ham soup (made by boiling in water bones of Chinese ham)
4 tablespoons toyo

Fry the garlic, onion, shrimps, pork, chicken, and sausages. Add the toyo, seasoning, and boiled shrimp soup. Boil 3 minutes. Stir to prevent burning. Add the patola and cabbage and continue boiling until the patola is half cooked. Add the ham soup and boil again, then the mique, which is first blanched in boiling water, drained, and fried for a few minutes in a small quantity of lard. Cook 5 minutes longer. Serve hot.

FISH-PINEAPPLE SALAD

1 cup flaked bañgos
1 apple, cut into small cubes
2 mandarins, divided into sections and peeled
1 cup pineapple, cut into small cubes
3 bananas cut in small pieces
½ cup coconut cream
3 tablespoons sweet pickles
3 tablespoons minced pili nuts
1 teaspoon salt

Cut a pineapple crosswise 2 inches from the top. Remove all the meat, taking care not to break the skin.

Cook the bangos in a small amount of water, salt, and 1 cup sliced pineapple.

Drain, flake, and remove all bones. Add the mandarin, banana, pineapple, and coconut cream, and mix well.

Fill the pineapple with the mixture and replace the top. Chill before serving.

FISH-GUAVA SALAD

½ cup flaked fish
1 orange
3 bananas
25 ripe guavas
1 teaspoon salt
¼ cup coconut cream

Boil the fish in a small quantity of water, salt, and pepper. Drain and flake.

Pare 10 guavas, open, remove the seeds, and cut in small pieces. Peel the orange, divide into sections, and peel each section. Cut the bananas in small pieces.

Mix the flaked fish and the sliced fruits. Add the coconut cream and chill.

Cut the tops from 15 large, ripe guavas. Remove the seeds. Fill the guavas with the chilled mixture, replace the tops and serve while cold.

(Bañgos, dalagang bukid, navajita, and other inexpensive fishes may be used.)

FISH-VEGETABLE SALAD

1½ cups flaked fish, previously boiled in a small amount of water with pepper and salt
2 cups grated papaya, worked with salt, washed, and pressed to eliminate the excess of water and salt
1 cup boiled string beans, cut in thin slices
2 tablespoons chooped sweet green pepper
2 tablespoons minced onion
4 tablespoons chopped green onions
3 tablespoons minced carrots
3 tablespoons sugar beets cut in small cubes
12 tablespoons mayonnaise dressing
1 teaspoon mustard
1 teaspoon salt
Juice of 1 lemon

Mix the mustard, mayonnaise, salt, and lemon juice. Add the minced vegetables and chill. Serve on lettuce leaves.

(Any fish may be used.)

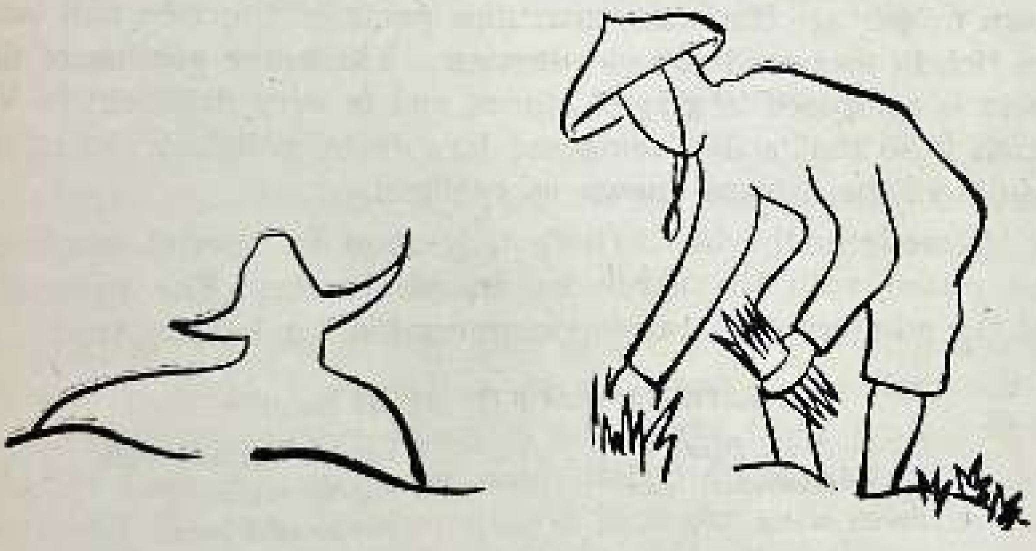
Chapter VII

RICE BRAN: A HEALTH FOOD AND HOW TO COOK IT*

By Maria Y. Orosa

In the process of polishing rice the material known as rice bran, or "darak," is removed from the rice kernel. This is also known as "tiki-tiki.." Rice bran is commonly used as a cheap feed for pigs, chicken, horses, etc.

Years ago the Bureau of Science found that rice bran contained a substance, vitamin B, that prevented beri-beri. The Bureau of Science also originated an extract of "darak," or "tikitiki," which is used extensively for the cure of infantile beriberi. Rice bran is not only rich in the valuable vitamin B but also has about 21 per cent fat, 12.5 per cent protein, and 45 per cent carbohydrates. It contains, therefore, excellent nutritive material and has a high calorific value. It is much richer in fat content than either wheat flour or rice, about as rich in protein as wheat flour, and much more so than rice. The Bureau of Science has found that fresh rice bran mixed with wheat flour will make excellent muffins, hot cakes, cookies, crackers, etc. which taste very much like similar products made from graham flour. These rice-bran foods are not only highly



proportion of half or more when mixed with wheat flour. The biscuits, crackers, etc., will be especially valuable for nourishing beriberi mothers whose children are likely to be infected. The darak should be used fresh or should be treated so that it will not become sour or rancid. The oil of ordinary rice bran contains a ferment that causes it to become rancid rather quickly. This ferment can be destroyed by heating the rice bran to 90° C., after which it has good keeping qualities. Rice bran, which is now practically a waste product, can be made the basis of a very profitable industry; it can furnish tasty, healthful, and very cheap food material for the Filipino people, and can take the place of much imported flour. It is estimated that more than these hundred thousand tons of rice bran are produced annually in the Philippines.

In this bulletin, the term "darak" is used in the Tagalog sense and signifies the outer portion of the grain after the husk (ipa) has been removed.

In polishing, the embryo is usually "knocked" off and is included in the darak. The embryo and the outer part of the grain proper are the most nutritious parts of the rice and both are rich in protein, fat, and vitamins. The inner portion of the grain is composed largely of starch and is very deficient in Vitamin B so that a diet composed largely of polished rice often results in the disease known as beriberi.

Sometimes the husk (ipa) is ground in special machines and mixed with the darak as an adulterate. The pure and not the adulterated darak is recommended for human food.

TIKITIKI-MALAGKIT MUSH No. 1

½ cupful tikitiki flour
½ cupful (malagkit) rice
2 cupfuls water
2 cupfuls coconut milk
1 cupful sugar
½ teaspoonful salt

Mix the coconut milk, water, sugar, and salt, and bring to a boil. Strain through a piece of cloth, and place in a pan. Add the rice and tikitiki flour and boil until the rice is cooked. Serve with coconut cream and sugar.

TIKITIKI-MALAGKIT MUSH No. 2

½ cupful tikitiki flour
½ cupful malagkit rice
2 cupfuls water
3 tablets of chocolate
2 cupfuls milk
⅛ teaspoonful salt
1 cupful sugar

Mix the water and milk and dissolve the chocolate, sugar, and salt. Bring to a boil and strain. Place in a pan and add the rice and tikitiki flour and cook, stirring constantly, until the rice is soft and the mixture thick.

DARAK POTO

½ cupful tikitiki flour
1½ cupfuls rice
6 teaspoonfuls baking powder
1 cupful sugar
¾ cupful coconut milk

Wash the rice, soak in water for a short time, and grind in a stone grinder. Let the flour settle to the bottom and drain off the water. Add coconut milk to the ground rice. Sift the tikitiki flour with the baking powder and sugar and mix well with the rice flour and coconut milk. Fill muffin pans nearly full of this mixture; cook in a pan of boiling water, or by steam. When cooked set in a pan of cold water for a few minutes. Remove the poto from the pan and serve with shredded coconut.

TIKITIKI BIBINGKA WITH GLUTINOUS RICE (Malagkit)

½ cupful tikitiki flour
1 cupful malagkit
1¼ cupfuls brown sugar
1 coconut
½ teaspoonful salt
½ teaspoonful powdered anise

Grate the coconut. Extract the milk by pressing between the hands. Work it with ½ cupful of water, and press again. Filter the milk, and set aside.

Extract the remaining juice of the coconut with 3 cupfuls of water, using 1 cupful in each extraction. Filter, add 1 cupful of brown sugar, bring to a boil, and filter again. Then add the malagkit rice, salt, and tikitiki flour, and cook in a pan until the rice is soft. Line a bibingka mold with banana leaf and fill with the rice mixture to ½ inch thickness.

Dissolve the sugar (¼ cupful) in the milk first extracted from the grated coconut. Add the powdered anise, and pour this over the rice-darak mixture. Cover the mold with a thin metal sheet and place red-hot charcoal underneath the mold and on top of the metal sheet, and cook until the top is brown.

If an oven is available, the boiled rice and tikitiki bran may be placed in a shallow dish, the coconut milk poured on top and the pan placed in the oven.

TIKITIKI-MALAGKIT KALAMAY NO. 1

½ cupful tikitiki flour
1 cupful ground malagkit
2 cupfuls coconut milk
1 cupful brown sugar

Mix the above ingredients in a pan, and cook over a moderate fire, stirring constantly, until the mixture becomes sticky and the rice very soft.

Line a plate with a piece of banana leaf, place the mush on it and sprinkle with a few tablespoonfuls of toasted grated coconut.

TIKITIKI-MALAGKIT KALAMAY No. 2

½ cupful tikitiki flour
½ cupful ground malagkit
4 cupfuls water
1 teaspoonful vanilla
1 few pinches of salt
2 tablespoonfuls butter or lard
½ cupful roasted linga

Boil the tikitiki flour and ground rice in water until the rice is soft. Add the salt, sugar, linga, and vanilla and cook until thick. Fry in a pan containing the hot butter or lard.

DARAK PALITAO No. 1

½ cupful tikitiki flour
½ cupful ground malagkit
½ teaspoonful salt
2 tablespoonfuls sugar

Wash the rice and soak overnight in plenty of cold water. Grind in a stone grinder. Place in a pan and let stand for a while undisturbed. Drain off as much water as possible by decanting it. Add the tikitiki flour and salt, and shape 1 tablespoonful portions of the mixture into long, flat, thin, tonguelike cakes. Drop in boiling water and cook until they rise and float on top. Remove from the boiling water and drop in cold water, then drain well. Cover with a mixture of equal proportions of finely shredded coconut, toasted linga, and sugar.

TIKITIKI PALITAO No. 2

½ cupful tikitiki flour
½ cupful rice flour
½ cupful sugar
½ cupful coconut milk
2 green coconuts
A pinch of salt

Sift the tikitiki flour, add to the wet rice flour, and mix well. (The rice flour may be made by soaking the rice overnight and grinding it in a stone grinder.) Add the salt, and knead the dough. Shape 1 tablespoonful portions into thin, long, tonguelike cakes. Drop in boiling water and remove when they rise and float on top. Set aside to drain.

Boil the coconut milk with sugar, and when thick add the finely grated green coconut, then the drained palitao, and cook 3 minutes.

PININDOT WITH BANANA AND SWEET POTATO

½ cupful tikitiki flour
½ cupful wheat flour
2 pinches of salt
2 ripe saba bananas, cut to small cubes
1 medium-sized sweet potato, cut into small cubes
1 cupful coconut milk
2 cupfuls water
⅓ cupful sugar

Sift the tikitiki flour, wheat flour, a pinch of salt, and 2 tablespoonfuls sugar, twice. Add just enough water to form a soft dough. Form into small balls, and drop these into the mixture of coconut milk and water brought to a boil. When the balls float, add the sweet potato, banana cubes, and then the sago. Boil until the potato and banana are tender. Sweeten with the rest of the sugar, add a pinch of salt, and just before serving add the coconut cream.

TIKITIKI FRITTERS NO. 1 (Maduya)

¼ cupful coconut cream
½ cupful tikitiki flour
¼ cupful wheat flour
½ teaspoonful baking powder
A pinch of salt
1 tablespoonful sago
3 tablespoonfuls sugar
1 egg
1/6 cupful milk
½ cupful shredded green coconut

Beat the egg. Add the sugar, milk, and the flour, previously sifted with salt and baking powder. Mix thoroughly. Then add the shredded coconut. Drop 1 teaspoonful portions in hot deep fat, and fry until brown. Serve with thick syrup.

TIKITIKI FRITTERS NO. 2

½ cupful tikitiki flour
½ cupful wheat flour
1½ teaspoonfuls baking powder
2 pinches of salt
½ teaspoonful vanilla
1 egg
⅓ cupful soy-bean milk
¼ cupful sugar

Sift the flours, baking powder, and salt, twice. Dissolve the sugar in milk. Gradually add to this the dry ingredients, and mix thoroughly. Then add the lightly beaten egg and vanilla. Drop by spoonfuls in hot, deep fat and fry until brown. Roll in sugar after draining of excess fat.

DARAK-BANANA FRITTERS

½ cupful tikitiki flour
½ cupful flour
5 ripe saba bananas
1½ teaspoonfuls baking powder
¾ cupful milk
2 tablespoonfuls sugar
1 tablespoonful lemon juice
¼ teaspoonful salt
1 egg

Sift the dry ingredients together, except the sugar; and the beaten egg and milk and beat until smooth. Peel the bananas and cut them into thin slices, lengthwise .Sprinkle sugar and lemon juice over the sliced bananas. Dip each slice in the batter, and fry in deep, hot fat until brown. Drain off excess fat and sprinkle with sugar (powdered sugar is best).

TIKITIKI ESPASOL

½ cupful tikitiki flour
½ cupful roasted malagkit ground
  to a fine flour
1 cupful sugar
½ cupful evaporated milk
½ cupful coconut milk
A pinch of ground anise seed

Roast the darak flour and sift it with the rice flour. Add the coconut milk and mix thoroughly. Boil the sugar and milk, add the mixture of flours and coconut milk, and boil until thick. Lastly add the ground anise seed, and cook a few minutes longer. Place on a board covered with toasted malagkit rice flour, pat, roll to ¼ inch thickness, and cut to desired pieces. Roll in toasted rice flour (malagkit) and keep in a closed container.

TIKITIKI GOLLORIA

½ cupful tikitiki flour
½ cupful wheat flour
½ teaspoonful baking powder
2 egg yolks
1 teaspoonful sugar
Water enough to moisten
1½ tablespoonfuls butter

Sift the dry ingredients (tikitiki flour, wheat flour, baking powder, and sugar) twice.

Work in the butter with the tips of the fingers. Add the egg yolks and mix thoroughly with enough water to form a soft dough. Transfer the dough to a floured board and knead until a fine, smooth dough is obtained. Roll out to a thick sheet and cut into small pieces 1¼ inches long and ½ inch wide. Lift on a fork and fold over to bring the two ends together. Fry in deep, hot fat until brown. Make a syrup of 3 parts sugar to 1 part water and, while boiling, drop in the fried golloria. Continue boiling over a slow fire, stirring constantly, until the fried dough is covered with a thin coating of sugar. Cool and keep in a well-closed container.

TIKITIKI OKOY

¾ cupful tikitiki flour
¾ cupful cornstarch

1 teaspoonful salt
1 teaspoonful baking powder

1 egg
½ cupful sliced shrimps
½ cupful sprouted mungo beans (taugui)
1 head sliced garlic
1 tablespoonful green onion cut to fine pieces
1½ cupful shrimp soup

Mix the tikitiki flour, cornstarch, salt, and baking powder and sift twice. Add the shrimp juice, the well-beaten egg, the green onion, and mung-bean sprouts. Drop small amounts in deep, hot fat to fry. When the flakes are half cooked, place on each portion a few slices of sliced shrimps and garlic, and continue frying until brown. Serve with vinegar and a small amount of garlic, chopped fine.

TIKITIKI MASAPODRIDA No. 1

¼ cupful tikitiki flour
¼ cupful wheat flour
⅛ cupful sugar
⅛ cupful shortening
⅛ teaspoonful salt
2 egg yolks

Sift the flours and salt twice and work in the shortening. Beat the egg yolks, add the sugar, and continue beating until thick. Gradually add the egg mixture to the flour and knead. A small amount of water may be added, if necessary. Place on a floured board. Pat and roll out to ¼ inch thickness. Cut with a biscuit cutter, brush each piece with egg yolk, and sprinkle over it a few grains of sugar. Bake in a hot oven until brown.

TIKITIKI MASAPODRIDA No. 2

½ cupful tikitiki flour
½ cupful wheat flour
6 tablespoonfuls sugar
6 tablespoonfuls butter or shortening

Brown the tikitiki and wheat flour in an oven. Add the sugar and sift twice. Work in the shortening with the finger tips. Add just enough water to make the dough cling together. Mold to desired shape, place on a baking sheet, and bake from 5 to 10 minutes.

TIKITIKI PASTE

1 cupful tikitiki flour
½ cupful soy-bean milk or milk
½ cupful sugar
Vanilla or grated orange peel

Mix the above ingredients and cook in a shallow, wide pan until it forms a solid mass that no longer sticks to the fingers. Add the flavoring and mix well.

Toss on a board covered with sugar, roll out to ¼ inch thickness and cut to desired pieces. Roll in sugar and wrap in candy wrappers.

TIKITIKI-SWEET-POTATO CROQUETES

½ cupful tikitiki flour
½ cupful malagkit
6 tablespoonfuls sugar
1 medium-sized camote

Sift the tikitiki flour and add to it the freshly ground malagkit. The rice is first soaked in water and then ground between 2 flat stones. The flour-water mixture is allowed to stand. The flour settles to the bottom with the water on top. The water may be carefully poured out of the container by decantation. Add 3 tablespoonfuls sugar and knead well.

Boil the sweet potato mash and add 3 tablespoonfuls sugar.

Make little balls of this dough, flatten them to small, thin circles and fill with sweet potato filler. Fold over to close the opening, flatten the croquettes, and fry in hot, deep fat until brown.

TIKITIKI SOY-BEAN FRIED COOKIES

¾ cupful tikitiki flour
¼ cupful soy-bean flour
¼ cupful wheat flour
2 tablespoonfuls sugar
2 tablespoonfuls shortening
2 eggs
A pinch of salt
1 tablespoonful water

Sift the flours with the salt and work in the shortening. Beat the eggs and add the water and sugar. Gradually add this to the flour and knead well. A small amount of flour may be added while kneading, if necessary. Roll out to a very thin sheet, as thin as can be made. Cut in rectangles 4 inches long and ¾ inch thick. Cut an opening at the middle and make a bow by inserting the two ends through the hole. Fry in deep, hot fat until brown, and drain of excess fat. Then roll in powdered sugar.

TIKITIKI BALLS

⅓ cupful tikitiki flour
⅓ cupful malagkit
⅜ cupful evaporated milk
½ cupful roasted peanuts, chopped very fine
¼ cupful sugar

Soak the rice overnight and grind in a stone grinder. Let stand and drain off as much water as possible. Add to the wet flour the tikitiki flour, ¼ cupful chopped peanuts, ⅓ cupful sugar, and enough milk to permit the mixture being formed into little balls. Drop these in boiling water and when the balls float take them from the boiling water and drain. Roll in the mixture of the remaining sugar and chopped peanuts.

TIKITIKI EMPANADITAS

½ cupful tikitiki flour
½ cupful wheat flour
3 tablespoonfuls butter
2 egg yolks
Roselle jam
Water, enough to moisten

Sift the flours and work in the butter. Add the egg yolks and mix thoroughly. Add enough cold water to make a thick dough, knead, and roll out to a thin sheet. Cut in small circles. Fill one side of the circle with 1 teaspoonful of roselle jam, fold over the other side and bring the edges together. Press the sides down with the tip of fork, and fry in hot, deep fat until brown.

TIKITIKI BUNUELOS

¼ cupful tikitiki flour
¼ cupful wheat flour
1 tablespoonful butter or lard
2 egg yolks
½ cupful water
⅛ teaspoonful salt

Boil the water, salt, and butter. Add the sifted flour and remove from the fire. Stir with a wooden spoon. Then add the egg yolks and mix thoroughly. Drop by teaspoonfuls in hot deep fat and fry until brown. Serve with thick syrup.

TIKITIKI PUDDING

¼ cupful tikitiki flour
½ cupful boiling water
2 tablespoonfuls sugar
1 small package of seedless raisins
1 cupful milk
2 eggs
A pinch of salt
A pinch of cinnamon

Cook the tikitiki flour and salt in water for 10 minutes. Strain through a piece of sinamay. Beat the eggs lightly in a pan. Add the sugar and milk, and mix thoroughly. Stir in the cooked tikitiki flour and mix to a thin, smooth paste. Add the cinnamon and pour in a pan lined with thick caramelized syrup; cook in boiling water until it reaches the consistency of custard. Place in an oven to brown the top, or use a sheet of metal with live charcoal over it, as in Tikitiki Custard.

TIKITIKI CUSTARD

¼ cupful tikitiki flour
½ cupful milk
3 egg yolks
½ cupful soy-bean milk
¼ cupful sugar
1 teaspoonful grated lime peel

Beat the egg yolks with sugar. Add the milk, soy-bean milk, the grated lime peel and mix thoroughly. Add the tikitiki flour and beat well until smooth. Line a mold with a thick caramelized syrup and when the syrup has dried out, pour in the mixture. Place the mold in a pan of boiling water and cook until the pudding solidifies. Brown the top by placing the mold in the oven or by placing a piece of sheet metal on top and covering it with live charcoal.

TIKITIKI BISCUITS NO. 1

½ cupful tikitiki flour
½ cupful flour
2½ teaspoonfuls baking powder
2 tablespoonfuls shortening
½ cupful milk
½ teaspoonful salt

Mix the dry ingredients and sift 3 times. Work in the shortening, and add the milk. Roll out to ⅓ to ½ inch thickness and cut with a biscuit cutter. Do not knead. Place on an oiled baking sheet, brush the top with white of egg and water, mixed, and bake in a moderate oven from 12 to 15 minutes.

TIKITIKI BISCUITS NO. 2

½ cupful tikitiki flour
½ cupful flour
2 teaspoonfuls baking powder
Enough milk to make ½ cupful with the egg yolk
1 tablespoonful sugar
2 egg yolks
4 tablespoonfuls butter or shortening
¼ teaspoonful salt

Mix the dry ingredients and sift three times. Work in the butter and add the well- beaten yolk and milk. Do not knead. Place on a buttered baking sheet, sprinkle flour over it, and roll out to ⅓ to ½ inch thickness. Brush the top with egg yolk. Bake in a moderate oven from 12 to 15 minutes.

TIKITIKI KUNDOL BISCUITS

½ cupful tikitiki flour
½ cupful flour
2½ teaspoonfuls baking powder
½ teaspoonful salt
2 tablespoonfuls shortening
⅓ cupful finely chopped candied kundol
2/3 cupful milk

Sift the flours, salt, and baking powder three times. Work in the shortening. Add the milk and chopped kundol, and toss on a floured board. Pat and roll out to ¼ inch thickness. Place on a well-greased baking sheet and brush the top with a mixture of egg white and a small amount of water. Bake in a moderate oven for 12 to 15 minutes.

TIKITIKI CRISP BISCUITS

½ cupful tikitiki flour
½ cupful flour
⅛ teaspoonful salt
1 teaspoonful sugar
1 egg yolk
1 teaspoonful butter
Milk, enough to moisten

Sift the dry ingredients three times. Work in the butter with the finger tips. Add the egg yolk and enough milk to make a stiff dough. Knead until smooth. Roll out on a floured board to a very thin sheet. Cut with a biscuit cutter, prick with a fork, brush with egg white and water, and bake in a slow oven for from 12 to 15 minutes, or until brown and crisp.

TIKITIKI CRACKERS

½ cupful tikitiki flour
½ cupful flour
½ cupful butter or shortening
1 teaspoonful baking powder
¼ teaspoonful salt
1 teaspoonful sugar
Milk, enough to moisten (a few tablespoonfuls)

Mix the dry ingredients and sift twice. Work in the butter with the finger tips. Add enough milk to make a stiff dough. Place on a floured board and knead lightly. Roll out to 1/6 inch thickness and cut with a biscuit cutter dipped in flour. Place on a buttered sheet and bake in a hot oven for about 10 minutes.

TIKITIKI RICH COOKIES

½ cupful tikitiki flour
½ cupful flour
½ cupful butter
⅓ cupful sugar
1 egg well beaten
½ grated lime rind

Cream the butter; gradually add the sugar, well-beaten egg, flour, and grated lime rind. Spread thinly on a buttered sheet, 2 inches apart, 1 teaspoonful portions of the cookie dough. Bake in a moderate oven until brown.

Pili nuts, raisins, or sliced candied fruits may be placed on each cookie before baking.

TIKITIKI SUGAR COOKIES

½ cupful tikitiki flour
½ cupful flour
⅓ cupful sugar
⅔ teaspoonful baking powder
⅓ cupful shortening
1 egg
1/9 cupful milk
½ teaspoonful vanilla extract
⅓ teaspoonful salt

Cream the shortening. Mix well with the sugar; add gradually the beaten egg and the flours, sifted 3 times with the salt and baking powder, alternating with the milk. Add the vanilla. Roll out thin, cut to desired shape, and sprinkle with sugar. Bake in a moderate oven until brown.

TIKITIKI COCONUT COOKIES

½ cupful tikitiki flour
½ cupful flour
1 teaspoonful baking powder
⅓ teaspoonful salt
1 egg
1/6 cupful grated coconut, partially dried
⅓ cupful sugar
⅓ cupful thick cream

Beat the egg until light; add the sugar, coconut, cream, and the flours, previously sifted with salt and baking powder. Chill. Place on a floured board and roll out to ½ thickness. Sprinkle with coconut; roll out to ¼ inch thickness and cut out with a round cutter. Bake on a buttered sheet, in a moderate oven, until brown.

TIKITIKI IMPERIAL COOKIES

¾ cupful tikitiki flour
¾ cupful flour
¾ teaspoonful baking powder
¼ teaspoonful grated nutmeg
¼ teaspoonful salt
⅓ cupful butter
½ cupful sugar
1 egg
1 tablespoonful milk
⅓ teaspoonful extract of lemon

Cream the butter and sugar. Add the well-beaten egg, milk and lemon extract. Sift the dry ingredients and add to the first mixture. Place on a floured board and chill. Roll out as thinly as possible and cut out with a desired cutter. Place on a buttered sheet and bake in a moderate oven from 8 to 10 minutes.

TIKITIKI DOUGHNUTS No. 1

¾ cupful tikitiki flour
1 cupful flour
2 teaspoonfuls baking powder
½ cupful sugar
1½ tablespoonfuls butter
2 eggs
⅓ cupful milk
½ teaspoonful salt
⅛ teaspoonful, each, of ground cinnamon and nutmeg

Cream the butter, and add ¼ cupful sugar. Add the remaining sugar to the lightly beaten eggs, and add this to the creamed butter and sugar. Add the mixture of flours sifted with salt, baking powder, and spices, and more flour if necessary to make a dough stiff enough to roll. Place on a floured board, knead very lightly, pat, and roll out to ¼ inch thickness. Cut with a doughnut cutter, fry in deep, hot fat until brown, drain, and roll in sugar.

TIKITIKI DOUGHNUTS No. 2

1 cupful tikitiki flour
1 cupful flour
2½ teaspoonfuls baking powder
1 pinch of each: cinnamon, clove, mace
½ teaspoonful salt
⅓ cupful sugar
1½ tablespoonfuls shortening
1 egg
⅓ cupful milk

Sift the flours with salt, baking powder, and spices three times.

Cream the shortening and sugar. Add the well-beaten egg and milk and mix well. Then add the flour and mix well. Add more flour to make a stiff enough dough to roll. Place on a floured board and knead lightly. Pat and roll out to ⅓ inch thickness and cut with a doughnut cutter. Fry in deep, hot fat until brown. Drain, and roll in powdered or granulated sugar.

TIKITIKI DOUGHNUTS No. 3 (Without Shortening)

1 cupful tikitiki flour
1 cupful flour
½ cupful sugar
1 teaspoonful cream of tartar
½ teaspoonful salt
¼ teaspoonful grated nutmeg
1 egg
3/8 cupful milk
½ teaspoonful baking soda

Mix the dry ingredients and sift three times. Add the well-beaten egg and milk, and knead very lightly. Place on a floured board and roll out to ¼ inch thickness. Fry in hot, deep fat until brown. Drain and roll in sugar.

TIKITIKI MUFFINS No. 1

1¼ cupfuls tikitiki flour
1 cupful flour
1 cupful sour milk
¾ teaspoonful soda
1 teaspoonful salt
2 tablespoonfuls butter
⅓ cupful molasses

Mix the dry ingredients and sift three times. Mix thoroughly the molasses and milk, and add this to the dry ingredients. Lastly add the butter. Fill well-greased muffin pans, and bake in a moderate oven for about 20 minutes.

TIKITIKI MUFFINS No. 2

1 cupful tikitiki flour
¾ cupful flour
4 teaspoonfuls baking powder
½ teaspoonful salt
¼ cupful sugar
2 eggs
1 cupful milk
3 tablespoonfuls melted butter

Mix the dry ingredients and sift three times. Add gradually the well-beaten eggs, milk, and melted butter. Fill well-greased muffin pans and bake in a moderate oven from 20 to 25 minutes.

TIKITIKI MUFFINS No. 3

¾ cupful tikitiki flour
¾ cupful flour
3 teaspoonfuls baking powder
½ teaspoonful salt
2 tablespoonfuls sugar
1 egg
¾ cupful milk
1 tablespoonful melted butter

Mix the dry ingredients and sift three times. Add the milk gradually, then the well-beaten egg, and the melted butter. Fill buttered muffin pans and bake in a moderate oven from 20 to 25 minutes.

TIKITIKI HOT CAKES NO. 1

½ cupful tikitiki flour
½ cupful flour
3 tablespoonfuls baking powder
¼ teaspoonful salt
1 tablespoonful sugar
2 eggs
1 tablespoonful melted butter
½ cupful milk, or more

Mix the dry ingredients and sift twice. Beat the eggs and beat the milk into them. Add this mixture gradually to the dry ingredients. Then add the butter. Drop by spoonfuls on a greased pan or griddle. Cook on one side until puffed and full of bubbles. Turn over and cook the other side. Serve hot with butter and syrup (usually maple syrup).

TIKITIKI HOT CAKES No. 2

1¼ cupfuls tikitiki flour
1 cupful flour
1 egg
½ teaspoonful salt
2 cupfuls sour milk
1¼ teaspoonfuls baking soda

Sift flours, salt, and soda. Gradually add the sour milk and the well-beaten egg.

Cook as in Tikitiki Hot Cakes No. 1.

TIKITIKI HOT WAFFERS

¾ cupful tikitiki flour
¾ cupful flour
½ teaspoonful salt
3 teaspoonfuls baking powder
1 tablespoonful sugar
2 eggs
1 cupful milk
1 tablespoonful melted butter

Mix the dry ingredients and sift three times. Add the milk gradually, the well-beaten eggs, and the melted butter. Pour in hot waffle iron and cook until both sides are brown. Serve with butter and syrup.

TIKITIKI CREAM WAFFERS

½ cupful tikitiki flour
½ cupful flour
3 teaspoonfuls baking powder
1 tablespoonful sugar
1 cupful cream
2 eggs
½ teaspoonful salt

Beat the egg whites and yolks separately, and mix the beaten yolks into the cream. Sift the dry ingredients and gradually add this to the beaten egg yolks and cream. Fold in the egg whites, beaten stiff, and bake in a hot waffle iron until brown. Serve with butter and syrup.

TIKITIKI COCONUT ROLL

¼ cupful tikitiki flour
¼ cupful flour
1 teaspoonful baking powder
½ cupful sugar
3 eggs
⅛ teaspoonful salt
2 tablespoonfuls cornstarch
Juice of 1 calamansi
1 teaspoonful grated mandarin or lime rind
1 tablespoonful water

Mix and sift three times, both kinds of flour, cornstarch, baking powder, and salt. Beat the egg yolks until thick and lemon colored. Gradually add the sugar, beating constantly while adding. Add the calamansi juice, water, and ½ teaspoonful of grated mandarin peel. Add the flour mixture gradually from the sifter. Fold in the egg whites beaten stiff, to which has been added ½ teaspoonful of the grated mandarin rind. Pour the batter in a rectangular shallow pan and bake in a moderate oven about 12 minutes. Take out of the Pan while hot and place on a piece of paper. Spread with coconut preserve. This is made by shedding green coconut and adding for each cupful of coconut 1 cupful of sugar and ¼ teaspoonful vanilla. Cook until it becomes very thick and color pink with certified food coloring. Roll the cake while hot. Cut crosswise to ¼ inch thickness before serving.

TIKITIKI MANGO ROLL

½ cupful tikitiki flour
½ cupful flour
1 teaspoonful baking powder
1 tablespoonful milk
½ teaspoonful milk
⅔ cupful sugar
3 eggs

Sift the flours and baking powder three times. Beat the eggs until very light. Add the milk and sugar and beat until creamy. Lightly stir in the flour mixture, and lastly the vanilla. Pour the batter in a shallow, rectangular cake pan and bake in a moderate oven for about 10 minutes. Take out of the pan while hot, turn out upside down on a sugared paper and spread with warm mango jam. Roll up firmly. Cut crosswise into ¼ inch thick pieces before serving.

Other similar rolls may be made using ube jam, guava butter, guava jelly, and other jams, jellies, and fruit butters made from native and foreign fruits.

TIKITIKI PLAIN CAKE

¾ cupful tikitiki flour
¾ cupful flour
2 teaspoonfuls baking powder
⅛ teaspoonful salt
¾ cupful sugar
⅓ cupful butter or shortening
1 teaspoonful vanilla
2 eggs
⅔ cupful milk

Sift the flours with baking powder and salt. Cream the butter and sugar; add the well-beaten yolks of the eggs and vanilla. Beat until creamy. Add alternately the flour mixture, and the milk. Fold in the well-beaten whites of the eggs. Bake in buttered layer-cake pans. Any jam, jelly, or frosting may be used.

DARAK SPONGE CAKE

½ cupful tikitiki flour
½ cupful flour
¼ teaspoon salt
4 eggs
1 cupful sugar
4 teaspoonfuls lemon juice

Sift the flours with the salt. Separate the whites and yolks of the eggs and beat the yolks until thick and lemon colored. Add the sugar gradually and beat again. Add the lemon juice and mix thoroughly. Fold in the flour, alternately with the stiffy beaten egg whites. (Be careful not to beat the cake at this stage.) Bake in a floured loaf tin in a slow oven for about 40 minutes.

DARAK HOT-WATER SPONGE CAKE

- ½ cupful tikitiki flour
- ½ cupful flour
- 1½ teaspoonfuls baking powder
- ⅛ teaspoonful salt
- ¾ cupful sugar
- 2 eggs
- ½ cupful hot water
- 1 teaspoonlul lime juice

Beat the egg yolks until thick. Add ½ of the sugar and beat until creamy. Then add the water and lime juice and beat again. Add the other half of the sugar to the whites beaten until frothy, and beat until stiff. To the beaten yolks add the flour little by little and fold this mixture into the whites. Bake in a pan lined with greased paper.

TIKITIKI SPONGE CAKE WITH COCOA

- ½ cupful tikitiki flour
- ½ cupful flour
- 4 eggs
- 2 tablespoonfuls cocoa
- ¼ teaspoonful salt
- 1 teaspoonful vanilla
- 1 cupful sugar

Sift the flour, salt, and cocoa. Beat separately the egg whites and yolks. Beat the yolks until thick and lemon colored. Add the vanilla; gradually add the sugar and beat again. Fold in carefully the flour alternately with the stiffy beaten egg whites. Bake in a floured sheet or loaf tin and bake in a slow oven, from 40 to 60 minutes.

TIKITIKI SOY CAKE

- 3/8 cupful tikitiki flour
- 3/8 cupful flour
- 1½ teaspoonfuls baking powder
- ½ teaspoonful cinnamon
- ¼ cupful soy milk
- ½ cupful sugar
- 2 eggs
- ¼ cupful shortening (butter)

Cream shortening; add the sugar, and cream again; add the egg yolks and beat well. Add the flours, sifted with baking powder and cinnamon alternately with soy-bean milk, and fold in the beaten whites of eggs. Bake in a greased pan, in a moderate oven, for about 35 minutes.

TIKITIKI COCOA CAKE

- 1 cupful tikitiki flour
- 1 cupful flour
- ½ teaspoonful salt
- 2 teaspoonfuls baking powder
- ¼ cupful cocoa
- 2 egg yolks
- 1½ cupfuls sugar
- ½ cupful shortening
- ½ cupful boiling water
- 1 teaspoonful vanilla
- 1 cupful milk

Cream the shortening and gradually add the sugar, beating continuously. Beat in the egg yolks. Add the milk and the flour sifted with salt and baking powder. Make a thin paste of cocoa and a little water, and add the boiling water. Add this to the batter. Lastly, add the vanilla. Bake in a greased pan in a moderate oven.

TIKITIKI ANGEL CAKE

3/8 cupful tikitiki flour
½ cupful flour
9 egg whites
1 teaspoonful cream of tartar
⅛ teaspoonful salt
1 teaspoonful vanilla
1 cupful sugar

Sift the flours and salt three times. Sift the sugar separately two times.

Beat whites of eggs to a froth. Add the cream of tartar and beat until the eggs are stiff but not dry. Gradually add the sugar, beating after each addition. Fold in the flour and lastly add the vanilla. Bake it in ungreased pan, in a slow oven from 60 to 75 minutes. Do not disturb while baking.

DARAK TOASTED POUND CAKE

1 cupful tikitiki flour
1 cupful flour
1⅔ cupfuls sugar
5 eggs
1 cupful butter

Work butter until creamy. Gradually add the sugar while beating constantly; then add eggs one at a time, beating vigously between the addition of each. When the mixture is of a creamy consistency, fold in the flour, and turn into a buttered and floured bread pan. Bake one hour in a slow oven. Cool, slice crosswise to ¼ inch thickness, and toast until brown.

TIKITIKI MAMON

½ cupful tikitiki flour
½ cupful flour
18 egg yolks
¾ cupful sugar
¾ cupful melted butter

Beat the egg yolks until thick and lemon colored. Gradually add the sugar, beating while adding, until the mixture becomes creamy. Add the flour gradually and then the melted butter. Bake in a moderate oven.

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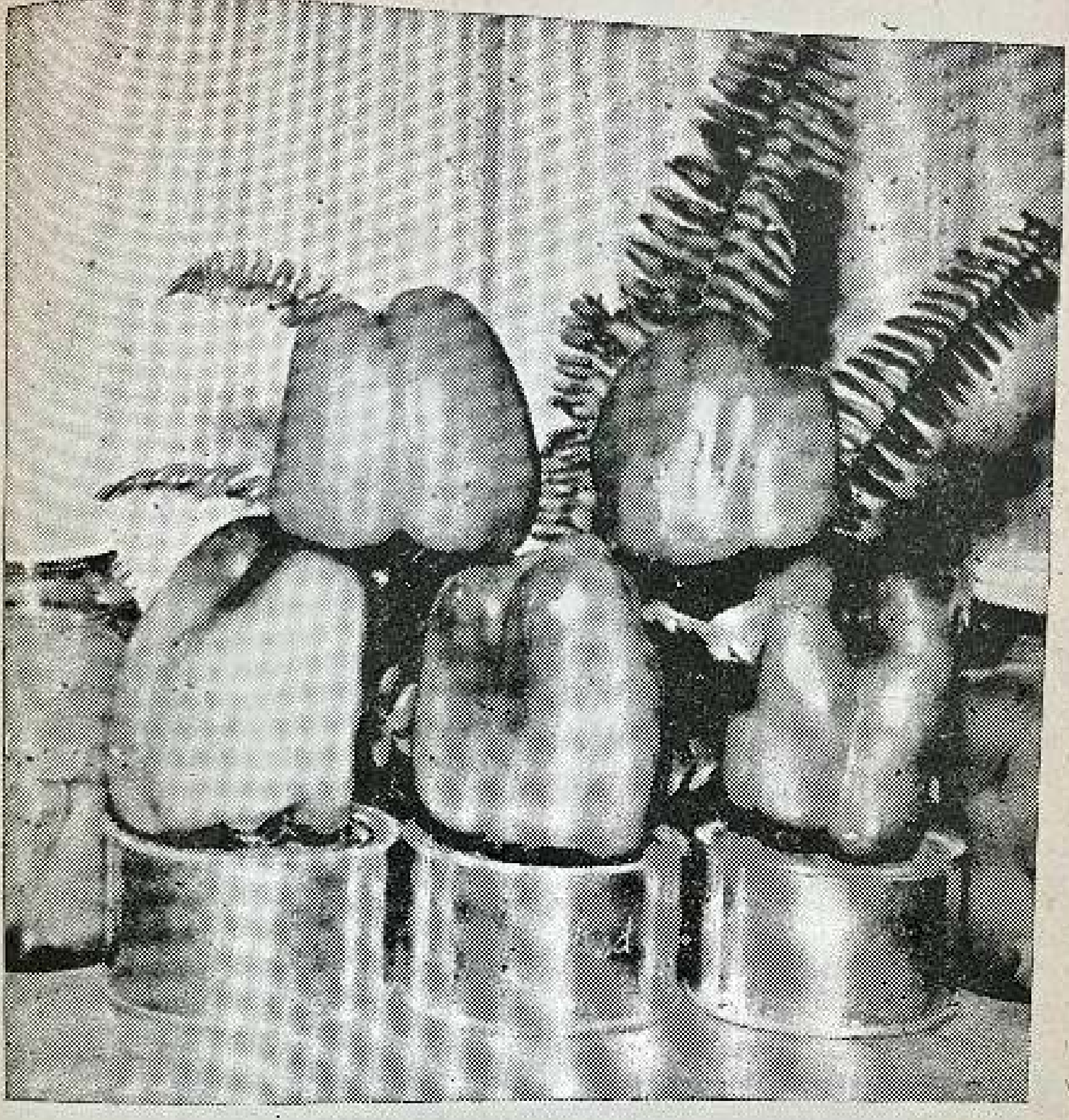
* From the Jorge Vargas Filipiniana Collection.



Vegetable Canning: The canning of pimientos (red peppers) like any other vegetable or fruit raised at home or bought cheap while in season was initiated through the Rural Improvement Clubs Organized by the founder of Home Extension Work in the Philippines, Maria Y. Orosa.

Chapter VIII

FOOD AND NATIONAL DEFENSE

By Maria Y. Orosa

A war is going on, surpassing in terror and cruelty all others that have gone before it. Half of the world is starving. Yet we are seemingly indifferent and unconcerned about the catastrophe that may befall us at any moment. We continue holding elaborate fiestas, picnics and parties, consuming and wasting entirely too much food.

Food is an indispensable factor to the health and strength of a people in time of war or in time of peace. It deserves a most important consideration in the planning of our national defense.

The right kind and amount of food taken in by every citizen will mean not only strong, vigorous bodies with steady nerves, but bodies resistant to diseases. Sickly, underourished individuals are a liability to any country. They constitute a burden to the community. They need care and medical attendance and food. Yet they produce neither food nor work.

Our defense program can only be complete if it includes the building up of the health of our citizens. It can be made possible only if each and everyone of us will cooperate in making our bodies fit. Fit to enjoy the blessings of living in normal times. Fit to accomplish our assigned work in times of emergency.

Knowing what foods we need to keep healthy and well we should eat accordingly, well-balanced meals. We should increase our food supply by growing food plants in every available space on our home lots. And we should learn methods to preserve foods, storing the excess in time of plenty, against a future necessity.

We are fortunate to have for our leader, a man not only of vision and ability, but also of devotion to his people. In creating the CEA he recognized a vital need of the country. One of the most important departments of the CEA is that of the Food Administration directed and controlled by Dr. Victor Buencamino, under whose administration and with the cooperation of the directors of the Bureau of Plant Industry and Bureau of Animal Industry, the food production campaign is gaining success all over the Islands.

By intensifying its home extension work with the women, the Plant Utilization Division is doing its share. The R.I.C. are busy on food preservation work; home demonstrators travel from town to town demonstrating food substitutes and cooking methods for emergency; central office personnel continue formulating low-cost, but well-balanced meals and emergency recipes.

For the economy, one-dish meal recipes, only cheap, common, easily grown foods are included. As much as possible the dishes are adapted to combine with rice to make a balanced diet. Since meats, fish and eggs are expensive, soy beans and other protein food are used for substitutes.

In emergency or war simplicity of ingredients, utensils, and method is stressed. Utensils are reduced to the rudest and simplest forms, such "natural" containers as banana sheath (saha), banana leaves and bamboo tubes being called in for service. Measuring cups and spoons are ignored, for in preparing these recipes it is assumed that nothing is on hand besides the barest essentials of food, matches and fuel.

THE OROSA PALAYOK-OVEN *

We are fortunate to have, at this time, an inexpensive oven, easy to get and to make, and simple to use.

When we consider that war, or even the threat of war, may drive people out of cities and towns and away from the supply of gas or electricity which make possible the baking of savoury, oven-cooked dishes, we feel that an inexpensive palayok-oven is nothing short of a boon.

With this oven we can do any kind of baking in the hinterlands or anywhere for that matter, and with any kind of fuel.

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* Better Homes, Oct. 15, 1941.

Our people have acquired the habit of eating oven-baked foods.

For breakfast pan de sal or pan de leche is served in most homes. And yet home ovens are practically unknown in our homes.

Most of the people in the provinces as well as in the cities depend on the bakery store for their supply of bread, cookies, biscuits and cakes.

Imported ovens run by gas or electricity are convenient and desirable, for those who can afford them, and wherever gas or electric power is available. Unfortunately most of our people cannot afford them and must forego a variety of delicious oven-baked foods. Consequently they content themselves with boiling, stewing, frying, simmering, steaming and fricasseing. But notice how popular baked foods are at parties! Baked macaroni and cheese, cakes, pies and cookies — these become special treats.

In a number of ways baked foods, meat and fish for instance, are really superior to those that are fried or boiled They are more attractive, being uniformly brown; more tasty, more nutritious, more digestible, and in the long run more economical. Meats are rendered more juicy for the searing that is a prerequisite to baking, and which prevents the juices from oozing out. Baked meats do not lose their minerals and vitamins like boiled meats. Boiling steams off the flavor where baking enhances it. Boiling toughens meat fibrins and dissolves some of the tissues.

Home baking should therefore be encouraged. Not only for cooking meats and fish but also for cooking breads and pastries

A trip to the bakeries in the provinces will convince a housewife that it is safer and more economical to bake foods at home, whenever possible. The sight of bread handled with bare, dirty hands and wrapped in pieces of dirty papers of a crumby "American" loaf bread which almost falls to pieces when cut with a knife, with its sourish fermented odor, cakes exceedingly yellow indicating color substitution for eggs; and a few other things that may not be pleasant about bakeries and bakery-made products, are enough to discourage a discriminating housewife from buying such preparations.

Now with the Palayok-Oven home-baking could be made more common. Surprisingly the palayok has been in use among the Filipinos for several centuries, but it has not occurred to anyone before to use it as an oven. It seems evident that with this discovery of utilizing the "PALAYOK" as an OVEN, many government projects will also be greatly facilitated.

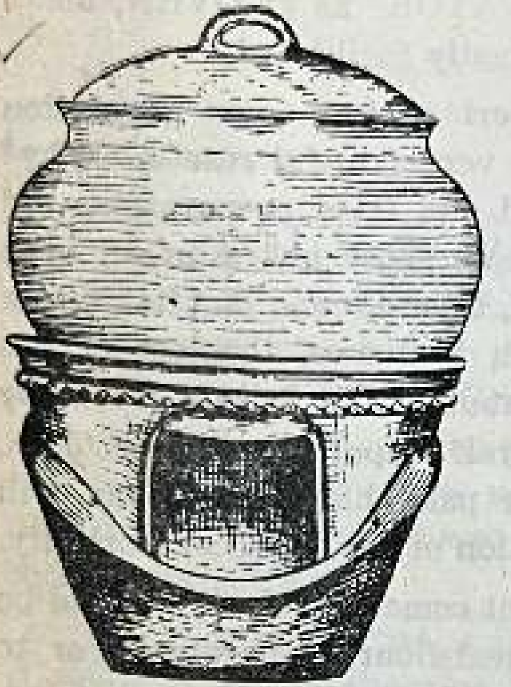
The campaign against beri-beri through the population of darak preparations did not give very fruitful results. Why? Because the mush and other boiled and fried preparations did not appeal to the palate as much as those baked in an oven such as darak bread, cookies, cakes, biscuits, and muffins. Since according to the Bureau of Health Statistics, the loss of life from beri-beri averages 20,000, annually the Palayok-Oven, by enabling house-wives to prepare darak preparations like cookies, breads, biscuits, muffins, and other palatable preparations, will play an important role in the reduction of the beri-beri mortality.

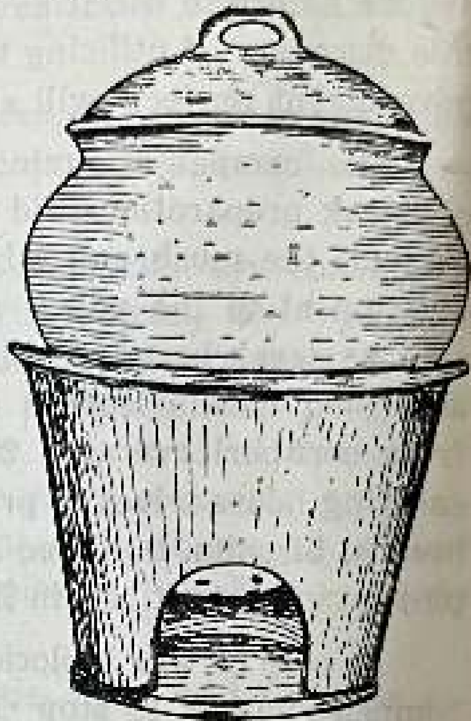
In case of war a blockade might come to pass. We would be compeled either to stop eating wheat-flour preparations, or to substitute the wheat flour with native flours such as banana, cassava, rice, corn, gabi, or ubi. These farm products which we have been popularizing would gain an easy access to our markets and homes. They will create a market for our own farm products, increase the income of our farmers, help the industrialization and economic adjustment projects of our government and assist in reducing the flour importation even during normal times.

Corn or maize, which is more nutritious and less expensive than rice and about the cooking of which we are limited to a knowledge of only a few ways, will gain a faster entrance to our homes and markets when made into flour or meal. Corn may be made into many diversified preparations. Cornbread, muffins, and biscuits may easily replace the popular breakfast breads that are made from wheat flour, such as "pan de sal", "pan de leche", and "pan de limon". Not only are these corn preparations nutritious and economical but they are also easily prepared and very attractive, having a pleasant odor and flavor and a golden-yellow color, stimulating to the appetite.

SIMPLICITY ITSELF

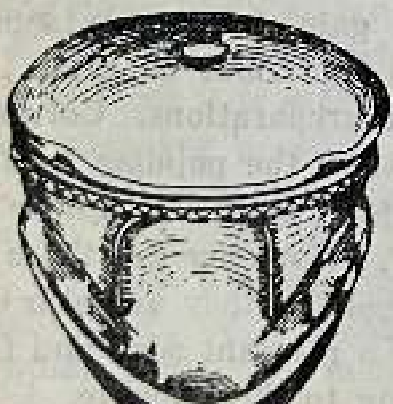
. . . is the Orosa Palayoc-Oven. But like most simple things it has to be exactly right to give best results.



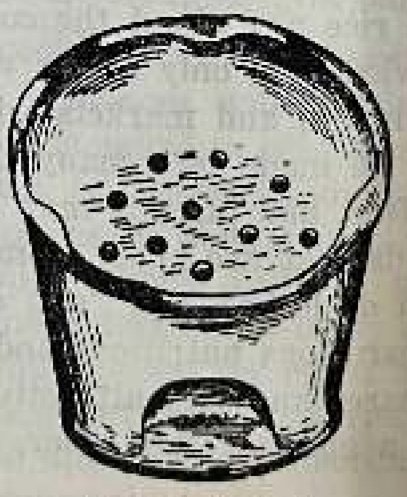


Notice how it sits above, first on a native calan or stove, and then on an imitation Japasese brazier. Its sides fit snugly against the lip of either stove so that as little heat as possible emanating from the coals underneath may escape and go to waste between stove lip and pot sides.

The pot and stove being both made of clay, a poor conductor, heat is concentrated and thrown upward against the wide shallow pot bottom.

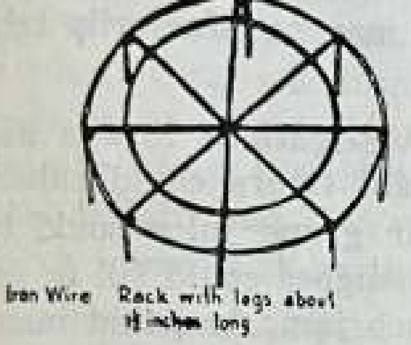


Native Calan.



Japanese imitation stove

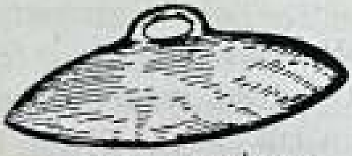
Inside the pot a metal disk catches the heat from the pot's rounded bottom and diffuses it evenly (See diagram above). On top of the metal disk stands a round *parilla* or iron rack with legs about 1½ inches long. This rack holds the food away from the metal disk which is too hot and might burn it. At the same time its legs allow for a free circulation of hot air around the food which is the principle of oven-cooking. Another metal disk with a convenient handle fits in the neck of the stove. This disk catches the heat thrown up by the bottom disk. By reflection it aids in keeping the air inside the stove uniformly hot, and browns the top surface of the food being cooked.



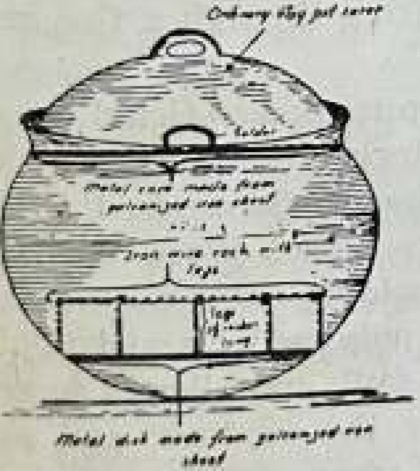
Iron Wire Rack with legs about 1½ inches long

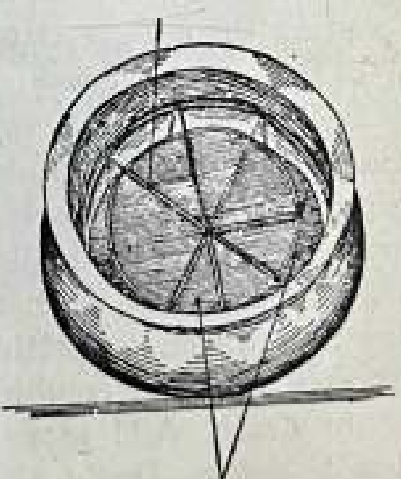
Metal disk to line the bottom of galvanyzed iron sheet

Metal cover with holder made from galvanyzed iron sheet



Ordinary clay pot cover


Ordinary clay pot cover
Metal cover made from galvanyzed iron sheet
Iron wire rack with legs
Metal disk made from galvanyzed iron sheet



Finally an ordinary clay pot cover goes on top of the metal cover without, please notice, going over the pot lip. This clay cover, again a poor conductor, acts as an insulator keeping the heat in the metal cover from escaping upwards, so that hot air may be kept circulating inside the pot between the two metal disks.

SPEAKING OF FOOD SUBSTITUTES *

LAST YEAR we imported ₱22,256,272.00 worth of canned and preserved food, excluding wheat flour of which we imported ₱9,692,054.00 worth.

That's a lot of pesos. And this state of affairs has been going on for some time. In an effort to reduce these amounts, the Plant Utilization Division of the Bureau of Plant Industry started experiments on local foods that may satisfactorily take the place of imported ones.

After a few years of scientific investigations it was discovered that cassava, corn, rice and gabi flours could substitute for wheat flour. That the popular grape juice could be replaced by duhat juice. That canned mangoes could fill in for canned peaches, and mango jam for peach jam. And that many other little — appreciated local foods could attain more prominence and glamour by substituting for fancy imported products.

How to Make Cassava and Gabi Flours

Cassava and gabi are pared, washed thoroughly, sliced very thin, and dried in the sun till crisp. These dried cassava pieces are called gaplek. They will keep if stored in hermetically sealed containers. They may be made into flour by pounding or passing through a grinder, and sifting through a fine sieve.

How to Make Cassava Starch

Peel fresh cassava, wash and chop to pieces. Grind through a chopper or stone grinder. Place finely ground cassava in a basin or tank and work with the hands. Separate the large pieces and fibers and allow starch to settle. Work the larger portions once more with the hands, adding more water. Again allow the starch to settle, separate pulp and discard it. The extracted starch is combined, stirred well, and allowed to settle and to drain. Add more water, stir the mixture, and again allow to settle. Drain all the water, scrape up the starch and place on drying tray of galvanized iron and dry thoroughly.

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* Better Homes, Oct. 15, 1941.

How to Make Corn and Rice Flour

Dry corn or rice completely. Grind and pass through sifter. The coarsely ground corn is called corn meal. We import corn meal in vacuumized cans. These are used for making corn mush, corn muffins, and corn bread. The Plant Utilization Division has made numerous experiments in corn meal and corn flour preparations and has formulated more than one hundred recipes.

The same division has also experimented on cassava flour and found that breads, biscuits, cakes, and cookies may be made from either cassava flour or starch, or the combination of both.

The recipes that call for yeast as the leavening agent, however, the maximum amount of cassava that may be used as wheat flour substitute is 50%. The other 50% is of course made up of wheat flour. In the case of American loaf bread and pan de sal the most satisfactory combination found is 25% cassava flour and 75% wheat flour. A larger amount of cassava makes bread that hardens upon cooling.

Duhat Juice for Grape Juice

A large quantity of non-fermented, refreshing drink, the grape juice, is imported yearly. Most of these are served in hospitals and in the homes as an ingredient in home-made punch. Experiments pointed to the fact that duhat juice is as nutritious and as refreshing as the grape juice. The duhat juice has moreover, a medical property in that it contains a glucoside jambolin which reduces the sugar content in the blood of diabetic patients.

Duhat juice may be made by working the ripe duhat with the hands; expressing it by hand and measuring the juice. To the residue is added clean, boiling water, of a quantity equal to that of the pressed juice. The mass is stirred well with a wooden spoon and strained through a clean piece of cheese cloth. The two extracts (1st and 2nd are combined and transferred into clean bottles, pasteurized, each 85° C for 30 minutes, and sealed with sterilized cork. The top of the bottle is dipped in melted parafin.

Canned Mangoes for Canned Peaches

Mangoes are cut in halves and the meat scraped with a silver spoon. The pieces are packed in clean jars, and boiling syrup of 1 to 1 (one part of sugar to 1 part of water) poured in to fill the jar. The jar is sealed partially or somewhat loosely and sterilized in boiling water — 25 minutes for quart jars and 15 minutes for pint jars. Immediately after sterilization the jars are sealed hermetically, inverted, and cooled in that position.

Mango Jam for Peach Jam

To the scrapings from mango seeds, skin, and imperfect mangoes, add for every cup of mango pulp, ½ cup of sugar and 1 tablespoonful of calamansi juice. Cook in an open vat, constantly stirring to prevent burning, to a thick cosnistency. Pour in sterilized jars while boiling hot, seal jars completely, and sterilize in boiling water — 30 minutes for quart jars, and 20 minutes for pint jars.

A WELL BALANCED DIET*

I ORGANIC NUTRIENTS

Proteins
Fats and oils
Carbohydrates
Food supplying proteins

Meat, fish, shrimps, beans, lentils, cheese, nuts, peas, fowls, etc.

Food supplying fats and oils:

Lard, butter, milk, cheese, body fats of mammals, fishes and fowls, fish liver, coconut, peanut, olive, other nuts, etc.

Food supplying carbohydrates:

Starch, sugar, rice, maize, wheat, potato, camote, candy, honey, gabi, ubi, camoteng cahoy, etc.

II MINERAL SALTS

Foods supplying inorganic substances:

Chlorine and sodium in sodium chloride (asin), water, etc.; calcium in milk, lima beans (patani), peas, eggs, repollo, water, etc; phosphorous in brains, bone marrow, meat, beans, nuts, legumes, etc.; iron in beans, peas, raisins, meat, spinach, alugbati, whole wheat, eggs, water, etc.; magnesium in meat, heart, brain, vegetables, fruits, water, etc.; iodine in salt water foods, fish, shrimps, alimasag, shellfish, water, vegetables and fruits near the sea shore; potassium in cereals, meats, vegetables, etc.; sulphur in eggs, liver, meat, mineral water, etc.; fluorine in cereals; copper, silicon, zinc, aluminum, etc.

III VITAMINS A, B, C, D, AND G

Foods supplying vitamins A and D:

D: Milk, butter, cheese, egg yolk, fish liver, avocado, carrot lettuce, spinach, alugbati, squash, pineapple, orange, cod-liver oil, etc.

Egg yolk, liver, heart, kidney, brain, meat, tikitiki and its extract, unpolished rice, whole wheat, maize, mungo, beans, yeast, camote leaves, alugbati, sitao, banana, papaya, repollo, orange, pineapple, etc.

Foods supplying vitamin C:

Orange (dalandan), calamansi, (calamondin), pomelo (lucban, suha) lemon, limonsito, dayap, lime, tomato, repello, lechuga, pineapple, banana, papaya, etc.

Foods supplying vitamins G or B2;

Meat, Milk, cheese, chicken, fish, eggs, shrimp, tapa (air dry meat), beans, lentils, peas, nuts, whole rice, yeast, whole wheat, etc.

IV ROUGHAGE OR INDIGESTIBLE CRUDE FIBER (CELLULOSE)

Foods supplying crude fiber:

Vegetables and fruits, batao, camansi, habichuelas, sitao, mungo, cabbage, kankong, paco, carrot, alugbati, malungay, pasao, colitis, camote leaves, young onions, etc.

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[4] From the Bureau of Science Popular Bulletin-16

Tomato Canned
Calamansi Preserve
Nata de Coco
Tomato Canned
Guava Preserve
Nata de Coco
Guava Jelly
Guava Jelly

Preservation of fruits, vegetables and other foods drew homemakers to the defunct Bureau of Science, now the Institute of Science, where the late Maria Y. Orosa did her pioneering work in the field of preservation. The popularity of this project led to the Creation of Home Extension Work in the Philippines.

Chapter IX

PAPAYA RECIPES*

NATIVE PAPAYA PICKLE

3 c grated green papaya
¼ c ginger, sliced thinly
¼ c native onion, peeled
1 c shredded carrot
½ c green and red sweet pepper, sliced
2 boxes of raisins

Mix all ingredients together and add ½ c of salt to soften and to extract the water from the vegetables. Press very well until dry. Soak in vinegar overnight. The following day, drain the vinegar.

Heat:

2 c vinegar
1 tbsp. salt
1 c sugar

Pour this into the mixed vegetables. Let stay overnight. Drain the following morning. Heat the syrup and pour into the vegetables again. Pack in sterilized jars.

PAPAYA GULAMAN

2-½ cups crushed ripe papaya
½ cup gulaman (agar)
1 cup water
1 tablespoon calamansi juice
⅔ cup sugar
½ cup coconut milk

Boil gulaman in water, add sugar and ½ tablespoon calamansi juice. When gulaman is all dissolved, remove from fire and strain well. Add the other ½ tablespoon calamansi juice to papaya, mix well, and drain. Add gulaman and coconut milk. Pour in a mold. When firm, unmold and serve cold.

PAPAYA PUDDING

2 cups mature papaya pulp, mashed (boiled to softness)
½ cup breadcrumbs
1 cup flour
¼ cup butter
¾ cup sugar
1 egg, well beaten
1 teaspoon flavoring (use vanilla, grated lime or orange rind)
¼ teaspoon salt

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* From Better Homes

Cream butter and sugar. Add well beaten egg, then flour. Add papaya, salt and breadcrumbs, then flavoring. Steam in a buttered pan for 2-½ hours, or until done. Serve with sauce made as follows:

SAUCE

1 cup milk
½ cup ripe papaya pulp, mashed
⅓ cup sugar
¼ teaspoon vanilla
2 tablespoons flour

Mix all ingredients except flavoring and boil continuously stirring, until thick. Add flavoring immediately after removing from fire.

PAPAYA CUSTARD

1 cup milk, scalded
1 egg yolk
2 tablespoons cornstarch
¼ cup sugar
¼ cup ripe papaya passed thru a sieve
½ teaspoon calamansi juice
A pinch of salt.
½ teaspoon vanilla

Beat egg yolk slightly and add sugar and salt. Add papaya, calamansi juice, milk, and cornstarch and mix well. Cook in a double boiler until thick. Add vanilla just before removing from fire.

PAPAYA MALACOFF

Line a greased mold with lady fingers and papaya preserve arranged alternately. Cover with boiled papaya custard. Fill the mold alternately with more sliced papaya preserve, lady fingers and boiled papaya custard, and place in a refrigerator to chill. Unmold and serve cold.

PAPAYA-PILI NUT ROLL

4 cups ripe papaya pulp, mashed
2 cups sugar
4 tablespoons calamansi juice
4 tablespoons glucose
1 cup pili nuts, roasted and chopped
1 teaspoon vanilla or any other flavoring

Mix papaya pulp, sugar, glucose, and calamansi juice and cook with continuous stirring until a paste consistency is reached (223F). Remove from fire, add flavoring and nuts, and stir well. Pour on a greased pan and roll to about ¼ inch thick. Upon cooling, sprinkle sugar. Roll as in ordinary roll, using a piece of clean cloth or oiled paper to effect a tight rolling. Cut crosswise to desired thickness.

PAPAYA TIDBITS

1 cup candied papaya
½ cup papaya maraschino, well drained
¼ teaspoonful salt
½ cup confectioner's sugar
½ cup roasted peanuts (other nuts maybe used)

Mix papaya, peanuts, maraschino, and pass through a food chopper. Add salt and sugar and mix well. If somewhat dry add a small amount of calamansi juice. Roll to a long, cylindrical form and dust with sugar. Let stand about 2 hours. Slice before serving.

CREAM OF PAPAYA SOUP

1 cup ripe papaya
2 bay leaves
1 onion, sliced
white sauce
2 tablespoons butter or margarine
2 cups water
2 tablespoons flour
½ cup evaporated milk; add water to make ⅔ cup
½ teaspoon salt
A pinch of pepper

Boil papaya with bay leaves, water, and onion, 10 minutes. Pass through a sieve and set aside. Melt butter or margarine; stir in flour; add milk and cook until thick.

Mix strained papaya and white sauce and boil. Season with salt and pepper. Serve hot.

PAPAYA ESCABECHE

2 cups green papaya, cut in strips
1 medium-sized fish
1 large onion, sliced
1 head garlic, sliced thin
1 tablespoon ginger, sliced into strips
1 hot pepper, cut in strips
3 tablespoons vinegar
1-½ cups water
3 tablespoons toyo
1-½ tablespoons flour or Cassava starch
4 tablespoons lard
2 teaspoons salt
Fat for frying fish

Clean fish and sprinkle with salt. Let stand about 15 minutes, and drain well. Fry in hot fat until brown and set aside. Sautè garlic, ginger, onion, and papaya until papaya is half cooked. Add salt and hot pepper into the mixture. Cook until liquid thickens and the papaya becomes tender. Place fried fish in a platter and pour over it the gravy mixture. Garnish with sliced red-sweet pepper.

PAPAYA OKOY

2 cups green papaya, shredded
2 tablespoons onion, sliced
1 cup shrimp extract (made by pounding heads and tails of shrimps, working with water, and straining)
¾ cup cornstarch
1 teaspoon salt
1 tablespoon green onions, cut to small pieces
A few shrimps (small size)
1 egg
3 tablespoons coarse salt
Lard for frying

Work green papaya with 3 tablespoons coarse salt. Wash and press water out by squeezing between palms of the hands. Mix onions. Set aside.

Make a thin batter by mixing shrimp extract, cornstarch, slightly beaten egg, and salt. Add green onions. Place a tablespoonful of papaya in a saucer and pour over it 1-½ tablespoons of batter. Place on top two or more shrimps, and fry in deep, hot fat until brown. Serve with a mixture of vinegar, pounded garlic and salt to taste.

PAPAYA DINUGUAN

2 cups green papaya, cut in thin strips
½ cup ground pork
2 cups chopped pig's blood, soaked in ½ cup vinegar
½ tablespoon onion, sliced
2 tablespoons tomatoes, sliced
¼ cup camias, chopped
1 tablespoon salt
1 hot pepper
2 tablespoons lard
1 segment garlic
2 cups water
1 tablespoon sugar

Sautè garlic, onion, tomatoes, and camias. Add ground pork and continue sauteing about 3 minutes. Add papaya and salt and continue cooking until papaya becomes tender. Add water and bring to a boil. Add blood, stirring constantly while adding. Drop in hot pepper and let mixture boil until blood is cooked and thick. Add sugar, and mix well. Serve hot.

PAPAYA CHOPSUEY

2 cups green papaya, sliced thin and long
¼ cup pork, sliced in pieces
¼ cup shrimp (whole)
1 teaspoon kinchay, cut in pieces
2 small onions, each cut in 4 parts
¼ cup liver, cut in pieces
2-½ tablespoons toyo
1 tablespoon flour
½ cup cabbage, cut in pieces
1 Chinese sausage, cut crosswise to thin slices
2 tablespoons lard
¾ cup broth
½ teaspoon sugar

Sautè the pork, then shrimp, liver and sausage. Season with toyo. Add kinchay and papaya, then the broth. Boil until papaya is tender. Add onions, cabbage, and sugar. Add a thin paste made with flour and about 4 tablespoons water. Boil until gravy thickens. Remove from fire and serve hot.

PAPAYA LUMPIA

- 3 cups green papaya, shredded to long, narrow pieces
- ½ cup pork, sliced to small pieces
- ¼ cup shrimps, sliced
- 2 segmens garlic, chopped fine
- 2 tablespoons onion, sliced
- 12 lumpia wrappers
- 2 tablespoons lard
- ¼ cup broth or shrimp extract
- ¼ cup sauce

Sautè garlic in lard; add onion, pork, and shrimps, and continue sauteing until done. Stir in the shrimp extract. Add papaya and cook until papaya is tender. Add sauce and mix well. Wrap in lumpia wrapper just before serving, and serve with sauce.

SAUCE

- 1-½ cups water
- 12 teaspoons cornstarch
- 12 brown sugar
- ½ cup toyo

Mix all ingredients and boil until thick, stirring constantly to prevent scorching.

BAKED PAPAYA-COMBINATION

- 1 cup green papaya, sliced
- ½ cup tomatoes, sliced
- 2 tablespoons onion, chopped
- 1 tablespoon green pepper, cut in pieces
- 1 teaspoon salt
- ⅛ teaspoons black pepper, ground
- 1-½ tablespoon butter
- ¼ cup water

Mix all ingredients and place in a greased baking dish. Bake in moderate oven about 30 minutes.

PAPAYA FRITTER

- 2 cups half ripe papaya, finely sliced
- 1-¼ cups flour
- 2 teaspoons baking powder
- ¼ teaspoon salt
- ⅔ cup milk, diluted with water (50-50)
- 1 egg

Mix well beaten egg and milk; add to sifted dry ingredients; add papaya and mix well. Drop the mixture by tablespoonfuls in deep-hot fat and fry until golden brown. Roll in sugar.

PAPAYA SALAD

1 cup mature papaya, cut in cubes
1 tablespoon shrimp, boiled in salt water, peeled and cut in pieces
½ tablespoon onion, chopped
French dressing
Parsley
Fresh lettuce leaves

Mix papaya, shrimp, and onions. Add French dressing. Arrange on a bed of lettuce in a salad plate, and garnish with parsley. Chill and serve cold if refrigeration facility is available.

ROYAL-PAPAYA SALAD

2 cups green but mature papaya, cut in strips
½ cup vienna sausage, cut in strips
⅓ cup celery cut to fine pieces
5 tablespoons Mayonnaise dressing
8 tablespoons French dressing

Soak sliced papaya in French dressing for 5 minutes. Drain well and add vienna sausage, celery, and mayonnaise dressing. Mix well. Chill and serve cold.

Chapter XI

VEGETABLE RECIPES

TALINUM RECIPES *

TALINUM-EGGPLANT APPETIZER

2 cups blanched talinum
1 eggplant, boiled and mashed
1 segment minced garlic
Bagoong to taste
4 tablespoons vinegar

Arrange talinum on a platter. Put mashed eggplant on top. Mix bagoong, vinegar, and garlic and pour over talinum.

TALINUM & CASSAVA COMBINATION

2 cups talinum
1½ cups sincamas cut into strips
2 tbsp. fresh cassava (grated)
¼ tsp. salt
2 cups water
3 native onions (sliced)
1½ tbsp. lard

Sauté onion, sincamas and toyo. Mix together and then add water. Let it boil for 3 minutes and then drop the cassava.

Cook, to thicken; add salt. Drop the talinum and cook for 3 minutes. Serve while hot.

MONGO WITH TALINUM

1 cupful talinum
1½ cup boiled mongo
½ cup pork fat (cut & made into chicharon)
3 tbsp. lard
7 cups water
1¼ tsp. salt
½ onion sliced
1 piece garlic pounded

Boil ½ cup mongo until tender. Add the chicharon to the boiled mongo to soften. Season with salt.

Sauté the garlic, add onion. Pour the mongo and let boil for 5 minutes. Add talinum and cook for 3 minutes. Serve hot.

TALINUM SIMPLE DISH

1½ cups talinum
2 small 'tokuas" (soy beanscurd) cut into small cubes
⅓ cup dried alamang
1 tomato chopped
1 piece garlic pounded
2 tsp. lard
1 cup water

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* From Better Homes — official organ of the Plant Utilization Division before World War II.

Fry tokua until light brown; sauté garlic, tomatoes, onion, alamang and tokua. Cook together and then add water. Cook for 10 minutes over a slow fire and mix in the talinum. Cook 3 minutes and serve while hot.

TALINUM SHRIMPS SALAD

1 cupful talinum
⅓ cup shrimps (boiled and shelled)
2 tomatoes
¼ cup mayonnaise (dressing)
1½ c. water
1 tsp. salt
1 tsp. sugar

Boil water; add salt and sugar. Blanch talinum for 3 minutes and drain. Mix talinum, shrimps and mayonnaise. Garnish with slices of tomatoes putting the rest of the mayonnaise on top of the tomatoes. Chill if possible. Serve.

TALINUM WHITE SOUP

3 cups talinum
¼ cups cooked pork, diced
1 cup cassava, diced
5 cups coconut milk
2 cups white stock of vegetables
1 egg (hard-boiled, chopped)
1 medium sized onion, chopped

Boil cassava and onion. Add pork. When done, remove from fire and add coconut milk, stirring constantly. Return to stove and let boil, stirring constantly to prevent curdling. Add talinum and cook 2 minutes longer. Garnish with egg and serve hot.

TALINUM WITH CRAB

1½ cups talinum (cut into pieces)
½ cup crab, boiled and flaked
1 onion, sliced
1 cup broth, pork and shrimp
1 tablespoon fat
1 section garlic
Toyo and pepper to taste
1 teaspoon flour

Saute' garlic, onion, and crab; add toyo. Pour in the broth and let boil. Add talinum; season with pepper. Thicken broth with flour and boil for a while. Serve hot.

TALINUM IN BLANKET

2 cups cut into small pieces (talinum)
1 tablespoon lard
1 segment garlic
1 diced onion
1 diced tomato
8 string beans
½ cup shrimp and pork juice
½ teaspoon salt
2 eggs
5 shrimps, shelled and halved
Toyo and pepper to taste
3 tablespoons diced, cooked pork

Saute' garlic, onion, and tomato, add pork, shrimp, string beans and toyo. Add shrimps and pork juice and let boil. Add talinum. Remove from fire and set aside. Beat eggs very well; and fry spreading thinly, over the bottom of the pan Remove from fire. Put the cooked vegetables on the cooked egg and roll. Serve hot with tomato catsup.

REGULAR SALAD

- 2 cups talinum
- 5 regular sized boiled shrimps
- ½ cup fried "dilis" (dried, tiny transparent fish
- 1 regular sized tomato
- 1 regular sized onion
- ⅓ cup vinegar
- Sugar, salt, and pepper to taste

Blanch talinum for 1 minute. Drain, marinate with vinegar, salt and sugar mixtures. Place on a platter and file the dilis upside down in the middle of the platter. Garnish with remaining ingredients.

ALUGBATI RECIPES

ALUGBATI WITH MEAT

- 2 bundles alugbati
- 2 ripe tomatoes (sliced)
- 2 cloves garlic (crushed)
- ⅓ onion (sliced)
- 1 cup cold water (or more)
- 2 tablespoons lard
- Salt to taste

Salt meat and set aside. Wash and sort alugbati taking care to remove bugs or other insect that may cling to some of the leaves. Sauté garlic, onion, and tomatoes. When done put the meat and cook about 10 minutes. Add cold water and cook until meat is almost done. Add alugbati and cook till tender. Season with salt and serve.

ALUGBATI WITH SHRIMPS

- 5 bundles alugbati
- 3 ripe tomatoes (sliced)
- 2 tablespoons lard
- 8 glasses cold water
- 1 cup peeled shrimps
- Salt and some onions

Sort and wash alugbati. Sauté tomatoes and shrimps. When partly browned add the water and bring to a boil. Add alugbati and boil until tender.

ALUGBATI PLAIN GUISADO

- 1½ cups alugbati
- 1 piece garlic, minced
- 1 tablespoon lard
- 1 teaspoon toyo
- ¼ teaspoon salt
- 1½ cups water

From "*Better Homes*".

Sauté garlic, add toyo, pour in water, boil and add salt to taste. Add alugbati leaves and cook for 5 minutes uncovered. Then pour into a deep plate and serve hot.

ALUGBATI GUISADO WITH BAGOONG

1½ cups alugbati
¼ cup pork, hal boiled and cut into cubes
1 tablespoon bagoong alamang (salted shrimps)
2 tomatoes, chopped
½ onion, salted
1 tablespoon lard
1 piece garlic, pounded

Sauté garlic until brown. Add onion, tomatoes, pork, and bagoong. Stir together for a while. Then add water and boil for ten minutes. Add alugbati leaves, cook for 3 minutes, remove from fire and serve.

CHAYA RECIPES *

CHAYA

A Vegetable (Jatropha urens L) Euphorbiaceas

Chaya is a semi-harbaceaus shrub, 2 or more meters big, and a native of Mexico. The branches are thick and fleshy and bear dark green, 3 lobed leaves and small white flowers. Introduced in 1919, this succeeds well at sea level. Easily propagated by cuttings.

The stem as well as the leaves are edible. The stem is peeled thick enough so that the white pitch of the stem is utilized.

CHAYA WITH CRABS

1½ cups chaya cut one inch long
⅓ cup crab meat (boiled)
½ onion sliced
2 tablespoons "toyo"
½ cup green onion cut into 2 in. long
1 tablespoon lard
1 cup juice (pounded crab shells
Dash of pepper

Sauté onion, chaya and juice. Season with toyo and pepper. Cook for few minutes. Add crab meat and green onion. Mix for a while and serve hot.

HOT CHAYA GUISADO

1 cup sliced chaya
¼ head onion (chopped)
1 small sweet red pepper
⅓ cup boiled crab
1 tablespoon lard
2 tablespoons salt
1 segment garlic (pounded)
1 hot pepper (native)
1½ cups coco milk

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* From the Bureau of Plant Utilization Division.

Cut chaya thinly crosswise. Sauté garlic, add onion, chaya, coconut milk and salt. Cook ten minutes. Add the hot pepper. Mix and serve.

CHAYA ROLLS

1 cup chaya (chopped)
1 tablespoon chopped onion
⅓ cup blanced shrimps, shelled and diced
1 cup coco milk
1 cup broth
1 teaspoon cornstarch
3 blanched cabbage leaves
1 teaspoon salt

Boil coconut milk; add onion, chaya, shrimps, and salt. Cook until liquid thickens. Add cornstarch and let it cook until thick. Cool. Boil in blanched leaves. Allow to cook 5 minutes longer in a little broth. Serve hot.

GUINATAAN (YOUNG CHAYA LEAVES)

1 cup young chaya leaves
1 cup coconut milk (diluted)
¼ cup pork (diced)
3 segments garlic (pounded)
Few leaves of "tanglad" or lemon grass
1 tablespoon bagoong alamang

Wilt young chaya leaves under the sun for 10 minutes then shred. Sun again for another 10 minutes. Place coconut milk in frying pan, add garlic, pork, lemon grass, and boil. Add bagoong and chaya leaves. Cook until very little sauce is left or until oil comes out. Remove lemon grass and serve hot.

CHAYA-ALAMANG GUISADO

1⅔ cups (peel stems and slice leaves)
¼ cup tamotoes, chopped
½ head onion sliced
¼ cup pork fat
1 tablespoon lard
⅓ cup "dilis" sliced
1½ tblsps alamang
1½ cups water
1 teaspoon salt
1 segment garlic, pounded

Fry the pork fat. Sauté garlic, onion and tomatoes. Cook for a while. Add alamang, chaya and "dilis". Keep on stirring for a few minutes. Add water and let it boil. Remove before the broth dries up.

CHAYA-SQUASH COMBINATION

1 cup sliced chaya (2 in. long)
1 cup sliced squash or ½ cup dehydrated squash (soaked in water 5 minutes)
½ medium sized onion, sliced
3 medium sized tomatoes (cut into cubes)
1 tablespoon lard
2 segments garlic, minced
2 tablespoons bagoong alamang
1 teaspoon salt
1 cup water

Saute' garlic, onion, tomatoes, bagoong and chaya. Mix and add water; let it boil. Add salt and squash. Cook for 10 minutes and serve.

FARMERS' DISH

1 cup chaya cut into cubes
1 regular sized dried fish "daing"
1 cup squash (dehydrated) or 2 cups sliced fresh squash
⅓ cup green onion, cut 1 in. long.
2 ripe tomatoes, cut to pieces
¼ cup onion, sliced
2 tablespoons lard
2 segments garlic, minced
½ tablespoon salt
2 cups water

Saute' garlic, onion, tomatoes, and chaya. Add water and boil; add "daing" that was previously cut to big pieces and soaked in water for 10 minutes. Add green onion and squash. Cook until almost dry.

CHAYA "SINIGANG"

½ cup pork cut into big cubes
2 regular sized ripe tomatoes (sliced)
4 pieces "camias" cut into halves
1½ cups chaya cut 3 in, long
¼ onion, sliced
2 teaspoons 'patis"
2 teaspoons salt
2½ cups rice water

Boil rice water together with tomatoes, camias and onion. Add pork, chaya and salt. When pork is tender add patis and serve.

ESTOFADO CON CHAYA

1 small sized pork tongue
1½ cups chaya
1 potato fried
3 "saba" bananas peeled whole
1 "pande sal (bread) fried
⅓ cup sugar
⅔ cup vinegar
1 tablespoon salt
¼ cup white wine
1 teaspoon allspice
5 cups water
3 segments garlic
¼ cup toyo

Fry potatoes, "saba" bananas and bread in hot fat. Set aside. Boil tongue with the rest of the ingredients except chaya, until tender. Slice tongue and return to soften; add chaya and the fried ingredients. Cook until done.

CHAYA KILAWIN

4½ cups chaya cut to strips
½ cup pork meat
½ sliced liver
2 segments garlic (pounded)
1 onion (sliced)
⅓ cup green onion
2½ tablespoons salt dash or pepper
½ cup pork heart

Cut pork meat, liver and heart into small pieces. Saute the garlic until brown; add onion and meat with the liver and heart. Pour the vinegar and water. Boil uncovered. Add chaya and salt. Cook 10 min. or until chaya and meat are tender. Add green onions and enough pepper to taste. Serve hot.

CHAYA LUMPIA (fresh)

1⅓ cups chaya cut into thin strips
1 cup squash cut into thin strips
⅓ cup shrimps boiled and diced
3 segments garlic, pounded
½ onion, sliced
2 tablespoons lard
1 tablespoon "achuete" coloring
1 cup broth
1 teaspoon salt
⅓ cup pork, boiled and diced

Sauté garlic; add pork, shrimps, chaya and squash. Add salt and broth, together with the "achuete" coloring. Cook until done. Wrap 2 tablespoons of the mixture in lumpia wrapper lined with lettuce leaves.

Serve with sauce:

4 tablespoons sugar, caramelized
¼ cup brown sugar
3 teaspoons cornstarch
4 tablespoons "toyo"
1⅓ cups water
6 segments garlic (pounded)

Mix sugar, cornstarch, "toyo" and water. Set aside. Caramelize 4 tablespoons sugar and gradually add to this first mixture, stirring constantly until smooth sauce is formed.

CHAYA IN COCO MILK

2 cups chaya cut 1 inch long
1½ cups coconut milk (diluted)
¼ cup pork diced
3 tablespoons shrimps (blanched and diced)
2 teaspoons coarse salt
3 segments garlic, pounded

Fry fat until lard is extracted. Leave 1 tablespoon of lard in the saucepan. Sauté garlic; add shrimps, chaya and salt. Add coconut milk. Let it boil once then cover and cook 15 minutes or until chaya is tender.

CHAYA WITH COCONUT SAUCE

1 cup chaya cut thinly, crosswise
¼ cup pork diced
1 tablespoon shrimps, chopped
1½ cups coconut milk (diluted)
2 segments garlic, minced
1 tablespoonul bagoong alamang

Put coconut milk, pork, shrimps, and garlic in a sauce pan. Let it boil. Add alamang, and cook until enough sauce is left.

KARI-KARI WITH CHAYA

½ kilo "goto"
2 eggplants
1 banana blossom
½ cup "sitao"
2 cups chaya
⅓ cup roasted rice, pounded
⅓ cup roasted peanuts, pounded
½ onion, chopped
2 segments garlic, pounded
⅓ cup "achuete" coloring
½ cup bagoong alamang
8 cups water

Boil "goto" until tender. Slice and prepare ingredients. Sauté garlic, onion and "achuete" coloring. Add the "goto" and stick. Cook until tender. Add peanuts and rice; boil. Drop vegetables; cover and simmer until the vegetables are done. Serve with bagoong "guisado".

CHAYA WITH SOTANGHON

1 cup chaya cut, diced
3 medium-sized tomatoes, chopped
½ cup ground pork
2 segments garlic
1 cup "sotanghon" (oaked and cut short)
2 cups water
4 tablespoons "patis"
Dash of pepper
2 tablespoons lard

Sauté garlic, add onion, tomatoes and pork. Stir for a while then add chaya, "patis" and dash of pepper. Add sotanghon and water and cook until a small amount of broth is left. Serve hot.

CHAYA PANSIT CANTON

1½ cups chaya (shredded thinly, 2 inches long)
¼ cup blanched, shelled shrimps
¼ cup carrots, shredded
½ cup boiled pork (sliced)
¼ cup green onion, cut finely
3 cups noodles (fried)
1 tablespoon lard
2 tablespoons "toyo"
1 teaspoon cornstarch
2 cups broth
Dash of pepper
¼ cup onion, sliced

Sauté onion, pork, chaya, carrots and shrimps. Add toyo and broth. When cooked, add a dash of pepper. Remove half of the mixture and add noodles. Cook 3 minutes longer. Set aside on a platter. Thicken the other half of the mixture with cornstarch and pour on top of the noodles. Serve hot.

Chapter XII

PEANUT RECIPES *

PEANUT BUTTER

2¾ cups peanut (400 grams)
2 tablespoons sugar
½ teaspoons salt

Pass peanut through a stone grinder as many times as needed to make it fine and smooth. Add salt and sugar and pass again through grinder several times until a very smooth, fine paste is obtained.

Pack in sterilized jars and seal air tight.

PEANUT SANDWICH FILLING

1 cup milk or water
1 tablespoon flour
½ tablespoon water
1 egg
1 teaspoon salt
1 tablespoon butter or other fat
¼ cup vinegar
Red pepper
2 cups roasted peanuts ground fine
1 tablespoon sugar

Heat milk. In the meanwhile mix flour with water, add eggs, salt and sugar. To this mixture stir in the heated milk. Cook five minutes, stirring constantly. Then add butter, vinegar, red pepper and ground peanuts.

CREAMED PEANUT ON TOAST

2 cups milk
1 cup finely ground roasted peanuts
1 teaspoon cornstarch
1 teaspoon onion juice
¼ cup chopped stuffed olives
1 teaspoon salt

(Canned pimientos, chopped green pepper cooked until tender, on chopped celery are equally as good as stuffed olives.)

Scald milk in the double boiler, reserving a tablespoon of cold milk to mix with the cornstarch. Add onion juice and other seasonings to hot milk. Bring to a boil and finish cooking in double boiler. Add the peanuts last before a serving. Serve on toast.

Good for a luncheon dish.

CREAMED PEANUT AND RICE

1 cup rice (uncooked)
2 cups chopped peanuts
White sauce:
3 tablespoons fat
½ teaspoon paprika
2 teaspoons salt
3 tablespoons flour
3 cups milk (whole or skin)

Boil the rice. Make a white sauce by blending the flour with the melted fat and stirring in the milk. Stir mixture over fire until it thickens. Mix rice, peanuts and seasoning with sauce, place in greased baking dish and bake 20 minutes.

PEANUT BRITTLE

1 cup chopped roasted peanut
¾ cup sugar

On a slow fire, melt sugar in a copper vat or any shallow container. When melted pour the peanut in and stir until well mixed. Pour on a greased board and spread thin. With a rolling pin, roll to a thin sheet. Cut to desired forms. Wrap in wax paper or any candy wrapper.

FRIED PEANUT

1 cup blanched peanut
1 teaspoon pounded garlic
½ teaspoon salt
2 tablespoons lard

Blanch peanut in boiling water from 5 to 8 minutes. Remove from fire and drain thoroughly. Fry in deep, hot fat. Sautè garlic in a small amount of lard, add fried peanut. Drain, and salt to taste.

PORK AND PEANUT

1 cup peeled boiled fresh peanut
¾ cup tomato sauce (or 1 small can)
4 pieces boiled pork
Dash of white pepper and sugar
½ teaspoon salt

Mix all ingredients mentioned above, and bake in a moderate oven, until golden brown. Serve hot.

BOILED PEANUT SALAD

½ cup boiled peanut (peeled)
⅓ cup blanched habichuelas (green beans), cut into cubes
1 small tomato
2 regular size shrimps
1 regular size onion.
½ cup blanched cabbage, cut fine

Blanch habichuelas and cut into cubes. Shred cabbage and blanch.

Marinate in French dressing.

Arrange on a platter and garnish with boiled shrimps, sliced tomatoes and onions. Dress with French dressing and serve.

BOILED PEANUT LUMPIA

½ cup boiled peanut
⅓ cup habichuelas (cut in cubes)
⅓ cup cabbage (cut thin)
1 tablespoon onion
1 clove of garlic
1 tablespoon lard
1 tablespoon salt
Dash of white pepper
⅓ cup shrimp juice
Shrimps
Wrappers

Sautè garlic and onion. Add shrimps, habichuelas and cabbage. Cook for a few minutes. Add shrimp stock stirring constantly to avoid curdling. Season with salt and pepper.

When done remove from fire and wrap in lumpia wrapper. Fry lumpia bundles in deep hot fat. Serve hot with vinegar seasoned with salt, garlic, and pepper, or Lumpia Sauce.

LUMPIA SAUCE

½ cup sugar
5 tablespoons cornstarch
½ cup sugar
⅓ cup toyo
2 cups water

Add all ingredients to the caramelized sugar and stir continuously over a slow fire until desired consistency is reached

PEANUT BALLS WITH SUTANGHON

½ cup chopped boiled peanut
½ cup sutanghon
2 tablespoons onion
1 tablespoon lard
1 clove of garlic
Dash of white pepper
½ cup chopped pork
1 egg
1 tablespoon salt
2 cups broth green onion

Mix peanut, pork, salt, pepper, green onion, and beaten egg, together and form into balls. Set aside. Sautè garlic and onion. Add the broth and let boil. Drop in the peanuts and cook till pork is done. Add the soaked sotanghon. Add salt and pepper to taste. Remove from fire and serve hot.

PASTILLAS DE MANI

1 cup ground fresh peanut
¾ cup milk
⅔ cup sugar

Pass peanut through a grinder. Mix all ingredients together and cook on a slow fire, stirring constantly to avoid burning. Cook to a thick consistency. Sprinkle sugar on a piece of bread and spread peanut paste with the aid of a rolling pin. Cut to desired shape or form. Roll in sugar and wrap in wax paper.

PEANUT MAZAPAN

1 cup ground peanut
¾ cup sugar
1¼ cup milk
1 egg

Mix ingredients except the egg.Cook mixture until thick. Cool and add beaten egg. Cook again slowly, stirring constanly, until desired consistency is reached. Shape to desired forms and bake in moderate oven until brown.

Peanut Candies

2 cups resh peanut, ground fine
½ cup water
1 cup sugar

Make syrup without stirring. When thick add peanut and stir constantly to avoid burning. Test the mixture to see whether it is ready for pouring, by dropping a small amount in cold water. If the mixture forms hard balls, remove it from the fire. Pour on a greased board and roll out to a sheet ½cm. thick. Cut into bar of convenient lengths and wrap in wax paper.

CASSAVA RECIPES *

CASSAVA CROQUETTES

1 cup mashed boiled cassava
⅓ cup boiled, flaked fish or crab, chopped pork or beef
2 tablespoons coconut milk to moisten
Salt and pepper to taste

Mix all ingredients and form into balls. Roll in flour and fry in hot fat.

CASSAVA SALAD

2 cups boiled cassava, cut in cubes
½ cup string beans, boiled and cut in cubes
½ cup carrots, boiled and cut in cubes
⅓ cup mayonnaise dressing
French dressing

Marinate vegetables separately in French dressing for ½ hour. Drain. Mix with mayonnaise and serve on a bed of greens.

CASSAVA BIBINGKA

1 cup grated fresh cassava
½ cup scraped "buko" (young coconut)
½ cup pure coconut milk
2 eggs
3 tablespoons melted shortening
4 tablespoons grated cheese
¾ cup sugar

Beat eggs, add sugar, melted butter and coconut milk. Mix in cassava and young coconut. Add 2 tablespoons cheese and mix well. Line a round pan with banana leaves and pour in the mixture. Bake in moderate palayok-oven. When almost brown, brush with butter, and sprinkle top with a little sugar and remaining cheese and bake further until golden brown.

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* From the files of Rosa Buenaluz

CASSAVA SUMAN

1 cup grated cassava
½ cup grated and chopped coconut
¾ cup sugar
Banana leaves

Mix all ingredients and wrap mixture in banana leaves to size desired. Tie by twos with string. Boil in water until done.

PLAIN CASSAVA PUDDING

½ cup grated fresh cassava
¼ cup coconut milk
¼ cup coconut milk
4 tablespoons sugar
1 egg
¼ cup dried rimas

Beat egg, add sugar, milk and grated cassava. Add raisins. Pour mixture on a greased pan and bake in palayok-oven 15 minutes.

CASSAVA ROLLS

1¼ cups cassava flour
1¼ cups wheat flour
2 eggs
10 grams Fleishmann's yeast (2 teaspoons)
⅓ teaspoon sugar
½ teaspoon salt
3 tablespoons milk
2 tablespoon melted butter
3 tablespoons sugar
¼ cup warm water

Dissolve yeast in water. Add ⅓ teaspoon sugar, salt, milk, beaten eggs, and melted butter. Add the remaining 3 tablespoons sugar, cassava flour, and mix well. Add wheat flour and knead on floured board until smooth. Roll out to an elongated form and divide into 8 parts. Form into round balls to the shape of wedding rolls. Place on buttered pan and let rise until doubled in volume. Bake in a hot palayok-oven for 7 minutes. Brush top with egg yolk before it browns and bake until brown. Remove from oven and brush while hot with melted butter.

COCO-CASSAVA HOT CAKE

1 cup cocomeal
1 cup Cassava flour
1 cup water
½ cup milk
2 eggs
4 teaspoons baking powder
1 teaspoon salt
2 tablespoons sugar
2 tablespoons melted purico or butter
2 teaspoons sugar

Beat eggs, add sugar, salt, milk, purico, water and mix well. Then add the sifted flour, cocomeal, and baking powder.

Grease a hot frying pan and drop the dough from a spoon. When the dough bubbles and shows holes, turn pancake upside down to brown the other side. Remove from pan. Serve with coco honey or syrup and butter.

COCO-CASSAVA-MONGO PATTIES

½ cup cocomeal (dried "sapal")
½ cup cassava flour
4 tablespoons bagoong juice
3 tablespoons lard
½ cup mongo, boiled and mashed

Mix cocomeal, cassava flour, and mongo. Add *bagoong* and lard, and work with fingers. Roll out to a thin sheet and cut to desired shape and size. Bake in moderate palayok-oven until done.

COCO-CASSAVA MOLASSES SQUARES

½ cup cocomeal
6 tablespoons molasses
½ cup cassava flour

Mix the above ingredients very well. Roll out to a thin sheet. Cut into desired shapes and bake or dry under the sun.

MONGO-CASSAVA PATTIES

¼ cup cassava flour
6 tablespoons mongo, boiled and mashed
5 tablespoons sugar
4 tablespoons water

Mix well the cocomeal and mongo. Add sugar and water and work with fingers. Roll out to a thin sheet and cut into 1 inch squares. Bake in moderate oven or dry under the sun.

COCOMEAL CRACKER

1 cup cocomeal, roasted
¼ cup hevi (dried shrimp) pounded
½ cup casava flour
2 tablespoons *tahuri* diluted
3 tablespoons water

Sift flour, cocomeal and powdered *hevi* together. Add *tahuri* water, and mix well. Work dough with fingers. Roll out to a thin sheet and cut in squares. Dry in very low oven until crisp. Keep in dry bottles.

Fry in deep hot fat before serving.

MIXED CASSAVA SALAD IN ASPIC

½ cup boiled carrot, diced
¼ cup boiled sugar beets, diced
½ cup string beans, blanched diced
2 cups boiled cassava diced
½ cup celery, diced
1 cup sweet corn (in can)

Boil 1 gulaman with 1 cup water.

Marinate the cut vegetables with French dressing. Drain well and add mayonnaise. Line a mold with gulaman and pack salad. Pour gulaman along the sides. Chill.

FISH FILLET

Clean fish fillet and sprinkle with salt, pepper, a little lemon juice. Roll fillets in beaten egg and cassava flour. Fry in deep fat until nicely browned.

CASSAVA CREAM SOUP

5 cups cassava stock (liquid of boiled cassava)	1 cup coconut milk
	1 boiled egg (chopped)
⅔ cup mashed cassava	Salt to taste

Boil the cassava stock with the mashed cassava and add salt to taste. Add coconut milk and let it boil. Remove from the fire; add chopped boiled egg. Serve hot.

CASSAVA BOLA-BOLA

2 cups mashed cassava
1 tablespoon salt
⅔ cup flaked fish

Mix mashed cassava and flaked fish. Add salt and mix thoroughly. Shape into balls; roll in flour and fry in deep hot fat until golden brown. Garnish with greens or vegetables soaked with a little salt, sugar and vinegar.

CASSAVA SALAD

3 cups boiled cassava, diced
1 tablespoon salt
⅔ cup egg sauce

Mix boiled cassava and the egg sauce thoroughly.

EGG SAUCE

Mash egg yolks. Add vinegar and salt; add enough cassava stock to make a smooth paste.

Chapter XIII

RICE AND CORN RECIPES *

CORN OKOY

½ cup boiled shelled shrimps with little salt
1 soybean or tokua — in cubes ½ cup
1 boiled egg sliced
1 cup corn — canned and drained or fresh
⅓ cup shrimp juice. Mix with 1 cup flour
1 tbsp achuete and ⅓ cup clean water — Mix for coloring
1 teaspoon salt
Enough lard to fry

Mix flour and shrimp juice and add salt. Add ¼ cup achuete coloring. Mix drained corn, tokua and shrimps and drop by spoonfuls into deep hot fat putting a slice of egg on top. Brown and serve with vinegar salt and pepper to taste.

CORN SOUP

1 cup chopped green corn
1 onion, sliced
¼ cup sliced shrimp
1 tablespoon lard
4 cups stock
1 cup pepper leaves (sileng labuyo)
1 segment garlic, (minced)
Dash of pepper
Salt to taste

Sauté garlic, then the onion, and shrimps; then add chopped corn. Add stock and allow to simmer until the corn is tender. Season. Add pepper leaves 3 minutes before removing from fire. Serve hot.

CORN WITH CLAMS

1 cup grated young corn
12 clams
1 cup clam stock
2 tablespoons sliced onions
⅛ teaspoon chopped ginger
1 tablespoon lard

Sauté onions in lard; add clams and ginger. Add young corn and stock. Boil and continue cooking in slow fire until corn is tender. Salt to taste.

YOUNG CORN ROLLS

½ cup cassava flour
½ cup wheat flour
1 teaspoon baking powder
Flour to roll
¼ cup coconut milk

Mix all ingredients, roll to ¼ inch thick, and cut into squares. Set aside.

FILLING:

1 cup boiled flaked fish
⅓ cup young corn, chopped
Juice of 1 calamansi
⅛ teaspoon pepper
1 tablespoon fat
½ cup coconut milk
½ teaspoon salt

Melt fat; add all ingredients and cook five minutes over a slow fire. Fill dough with this mixture and roll 3½ inches long. Place in greased baking dish and bake in hot palayok-oven for 20 minutes.

CORN LOAF

¾ cup corn flour
1½ cups ground pork
2 eggs
½ onion (chopped)
Pinch of salt, pepper

Mix flour, eggs and salt to form a dough. Shape into a loaf. Line a pan and fill the inside with the ground pork mixture. Bake in the palayok-oven for 45 minutes with onion and pepper.

DELICIOUS CORN TURN-OVER

½ cup corn flour
1 slice pineapple
6 pieces mango
¼ cup brown sugar
1 tablespoon shortening
3 eggs
⅓ cup granulated sugar
1 teaspoon baking powder
2 tablespoons water

Boil water, sugar and shortening in a pie plate. Arrange pineapple at the center, scooped mangoes at the sides and set aside.

Beat eggs separately and mix. Fold in sugar and other sifted dry ingredients. Pour this over the arranged fruits. Bake in the oven for 25 minutes. Turn over into a cake plate.

PAELLA

1 kilo chicken (dumalaga)
Boiling water
1 small onion, sliced
1 stalk celery, cut
2-3 sprigs parsley, finely cut
4 tablespoons salad oil
2 cloves garlic, crushed
2 cups uncooked rice
¼ tsp. monosodium glutomate
1 bottle beer or ale
½ teaspoon oregano
¼ teaspoon pepper
2 teaspoons salt
½ cup cooked peas
¼ cup pimientos, cut in pieces
½ pound sweet sausage, sliced
2½ cups chicken broth

Place chicken in large kettle; cover with boiling water. Add onion, celery, parsley and salt. Cover and simmer until tender, about 2 hours. Remove chicken from broth; cut into pieces. Measure broth, add sausage and boil until liquid is reduced to 2½ cups. Heat salad oil in a shallow casserole. Add crushed garlic cloves and rice. Cook over low heat until rice is lightly browned. Add chicken broth, beer, oregano, pepper, salt, the cut chicken, peas, pimientos and sausage. Bring to a boil; stir and reduce heat; cover and cook over low heat 15 minutes. Add peeled shrimps. Mix lightly. Put clams part way into rice, standing upright. When cooked, the shells pop open to form a decorative pattern. Cover and cook 10 minutes.

ARROZ A LA CUBANA

2 cups of ground meat
6 cups cooked rice
4 tablespoons lard
2 crushed garlic heads
1 onion chopped
1 small package seedless raisins
3 tablespoons tomato catchup
4 saba bananas sliced lengthwise and fried
2 fried eggs.
1 small canned tomatoes

Sauté the garlic, onion and tomatoes in the lard. When half of the water has evaporated add the ground pork and raisins which have been soaked in water and mix well. Cook over a slow fire for five minutes stirring it constantly to avoid sticking. Season with salt.

Mould the rice in a platter. Spread the mixture on top covering all the rice. Garnish with two fried eggs on top and fried bananas on the sides.

CORN WITH CHICKEN MEAT

1 cup corn (scrapped)
1 cup chicken (cut into pieces)
1 segment garlic, minced
1 tsp. toyo
½ tsp. salt
⅛ tsp. pepper.
½ c. sili leaves (pepper)
1 tsp. lard
2½ c. water
½ onion, sliced

Sauté garlic and onion; add corn and chicken. Season with toyo and salt; add water and boil. Cook until corn and chicken are tender. Add sili leaves. Cook for 2 minutes and serve.

STUFFED CHICKEN MEAT IN CORN SOUP

1 cup corn, scrapped
¼ cup chicken meat, chopped finely
½ onion, chopped
1¼ tsp. salt
1 tbsp. lard
⅛ tsp. pepper
2½ c. water
1 **tbsp. egg white**
½ tsp. flour
2 apulid, cut into strips

Add ¼ tsp. salt, pepper, flour and egg white to the pork and mix all these together. Add 3 strips of apulid and form into balls. Put aside until ready to cook.

Sauté onion and corn; add water. Let it boil for 10 minutes. Then drop the balls one by one. Let boil and add the rest of the salt. Cook for another 10 minutes. Serve hot.

CORN LUMPIA

1 cupful corn (scrapped)
1½ cup shrimps (boiled and cuc
into halves
1 onion
1 tbsp. lard
1 tsp. toyo
¼ tsp. salt
⅛ tsp. pepper
1½ c. water of broth
5 leaves lettuce
5 lumpia wrappers
Lumpia Sauce

Sauté onion, shrimps, corn, salt and toyo. Season with pepper. Add water and bring to a boil until dry. Pour on a plate and cool.

Wrap 2 tablespoonfuls in lumpia wrapper with lettuce. Arrange on a platter and serve with lumpia sauce.

CORN OMELET

2 crabs (boiled and flaked)
1 cup corn scraped
1 onion sliced
2 eggs, beaten
1 tsp. toyo
¼ c. lard
2½ c. water
⅛ tsp. pepper
½ tsp. salt

Sauté onion, corn, toyo and salt. Add water. Cook until corn is tender. Add crab and keep on stirring until no broth is left. Pour the corn mixture in the beaten egg and cook in hot omelet pan. Serve with kitchup as desired.

RICE AND CORN CONTEST

Nov. 29, 1959

The following rice and corn recipes were the entries of a contest among RIC held on the occasion of the birth anniversary celebration and unveiling of the marker of Maria Y. Orosa.

CORN A-LA-MODE

2 cups corn meal boiled
¼ cup boiled, shelled shrimps
2 eggs
¼ cup shrimp juice
1 teaspoon baking powder
Enough lard for frying
1 teaspoon salt

Mix the milk with the shrimp juice. Set aside. Mix all dry ingredients except the shelled shrimps. Drop the eggs and mix thoroughly. Lastly pour the liquid and stir well.

Heat the fat and drop by spoonfuls taking care that 3 pieces of shrimps are inserted in the middle.

Fry till light brown. Serve hot with any sauce.

Mrs. ROSABELLA AGUILAR

FRUIT "PUTO"

2 cups rice galapong
(rice batter)
⅓ cup sugar
2 tbsp. melted margarine
1 egg
Any quantity of the following:
  Candied condol
  Fresh nanka
  Pineapple
  Chopped toasted casuy nuts
1 baking powder

Soak 1½ cups washed rice with 1¼ cups water overnight. The next morning, grind this in a stone or meal grinder. This will make 2 cups of "galapong" or rice batter.

Mix the sugar, margarine, egg, Baking powder with the "galapong" thoroughly. Pour this batter mixture on tin individual molds. Garnish the top with the finely sliced candied condol, fresh nanka, pineapple and chopped toasted casuy nuts.

Steam for 25 minutes. Remove from the mold and serve.

MARIA QUINTOS

PLAIN RICE CAKE A-LA-BARRIO

2 cups galapong (mixture of 1
2 mature coconuts shredded (ex-

cup rice soaked in 1 cup water and ground)
1 tsp. salt
tract 4 cups milk diluted with water)
2 pieces panucha (regular size)

Mix the galapong with the salt. Melt the panutsa in the coconut milk. Heat the carajay. Brush with lard. Drop the galapong by spoonfuls in the carajay and cover to cook. Invert to cook the other side of the cake as in hot cokes. When done, drop the cake into the coconut milk syrup. (Coco milk with panutsa dissolved) Serve in a saucer deep enough for the syrup and the cake.

Mrs. GUADALUPE VELOSO

OYSTER ARROZ CALDO

½ cup rice
1 tbsp. ginger juice
½ tsp. black pepper
5 calamansi
1 head garlic
4 tbsp. lard
3 tbsp. patis

Boil ½ cup rice into 4 cups cold water. When done, set aside. Saute garlic in hot lard (4 tbsp.) add ginger juice boiled rice with the broth then boil again. Lastly add the oyster and season it with patis and black powdered pepper. Serve hot accompanied with calamansi.

By: MARIA CRUZ

CORN GULAMAN IN EGG SHELL

3 strips of native white gulaman
1 cup water
1 small can evaporated milk
1 ⅔ cups sugar
½ cup corn water (from boiled corn)
1 cup finely scrapped boiled corn

Wash the gulaman. Mix together the water, sugar and corn water in a saucepan, and bring to a boil. When the gulaman has dissolved, strain through a cheese-cloth. Pour the milk into the mixture, add the corn and mix very well. Fill up 18-19 egg shells three-fourth full. Set aside to mold.

When set, break the eggshells and invert the gulaman in individual saucers or platter and serve.

Mrs. PRAXEDES SUASI, First Prize

RICE TIMBALES

3 cups boiled rice, cooled
½ cup red and green sweet pepper, finely diced
½ cup small shrimps (alamang)
3 eggs (2 beaten, 1 boiled)
2 tomatoes medium sized, diced
1 small onion, diced
1 cup camote tops, blanched

or chopped shrimps
1 tbsp. calamansi juice
1 tbsp. butter
½ cup sliced boiled beans (habichuelas, boiled with 1 tbsp. sugar and tsp. salt.
½ cup ground pork
2 segments garlic, minced
1 tbsp. lard
A pinch of black pepper
2 tsp. salt

Saute' the garlic in fat. Put the tomatoes and then the onions. Let it simmer until thick enough. Add the ground meat and cook. Set aside.

To the boiled rice mix 2 well beaten eggs with the salt and pepper. Divide the boiled rice into 4 parts and set aside.

Grease a baking dish or a loaf pan and spread one portion of the rice evenly making a layer on the bottom. On top of this layer, put the sweet pepper mixed with the alamang or shrimp with the calamansi juice and salt.

On top of the shrimp layer, spread the second portion of the rice. On top of this layer, put the beans.

Spread the third portion of the rice on top of the beans. Put the sauted meat over this rice.

The fourth portion of the rice will not be laid over the ground meat layer. Brush the top with butter and bake the dish in a moderate Orosa Palayok Oven, from 15-20 minutes. When done, remove from the oven and invert on a platter.

Garnish with the blanched camote tops seasoned with a pinch of salt. Arrange the slices of boiled egg around.

Mrs. LOURDES R. GUTIERREZ

CORN ALMON DE GAS — Young Corn

2 cups boiled young corn (drain)
½ cup ground meat
2 tsp. salt
¼ cup finely cut green onion
1 head onion (chopped fine)
1 head chopped garlic
2 regular size sweet pepper (red and green chopped)
½ tsp. finely powdered pepper (black)
2 eggs
Enough flour for rolling
Enough lard for frying

Mix all ingredients above except the lard. Make into ball good for serving.

Heat lard. Fry the rolled balls of corn in deep hot fat until brown or well done. Drain.

Arrange in bed of lettuce. Serve with tomato sauce or catchup.

Mrs. AMPARO SANTOS

RICE ROLL SPECIAL

- 1 cup rice, boiled
- ½ cup malagkit, boiled
- 1 teaspoon salt
- 1 tablespoon shortening or any cooking oil
- 1 teaspoon macerated garlic
- 3 tablespoons diced onion
- 1½ cups boiled diced pork or chicken, shrimp and fish
- 1 red sweet pepper, cut into strips
- ½ raw egg
- Toyo and pepper to taste
- ½ raw egg cut into strips
- ½ cup chopped tomatoes

Sauté garlic, onion and tomatoes very well; and add diced pork, pepper and season to taste. Cook for a few minutes. Remove from fire. Add egg and mix well.

Spread rice on banana leaves. Place the meat filling at the center with strips of peppers arranged parallel with the mixture and make a roll such that the meat stays in the middle.

Tighten the roll with banana leaf. When it is formed, remove the leaf before serving. Slice to any desired thickness, crosswise and serve.

Miss PURIFICACION MAGSAMBOL

RICE-PINEAPPLE UPSIDE DOWN CAKE

A.

- ⅓ cupful margarine
- 1 small can sliced pineapple
- ¾ cupful brown sugar
- ⅓ cupful boiled rice

B.

- ½ cupful margarine
- 1 egg
- 1 teaspoonful calamansi juice
- ¼ cupful cornstarch
- 1 teaspoonful salt
- 1 cupful white sugar
- 1 teaspoonful orange extract
- ⅓ cupful evaporated milk
- ½ cupful flour
- 3 teaspoonful baking powder
- 1 tsp. vanilla

A. — Melt first one third cupful of margarine in a cake pan. Add brown sugar at the bottom of cake pan. Arrange drained pineapple and boiled rice. Set aside.

B. — Cream the second one third cupful of margarine. Add. sugar gradually. When creamy beat in egg. Combine milk, pineapple syrup, calamansi juice, and orange juice.

Sift dry ingredients together and add alternately with the liquid, beating well after each addition. Pour into preserved cake pan with the pineapple. Bake in an oven 350° F from 40 to 50 minutes.

Invert from the pan to a cake plate and serve.

Mrs. ELENA ANTE

RICE-CORN A-LA-FILIPINA

150 pieces of halaan
2 regular-sized diced potatoes
2 red peppers, sliced (1 for garnishing)
5 segments of garlic, minced
2 small onions, chopped
6 ears of corn, grated
1½ chupas of malagkit (glutinous rice)
1 coconut, shredded (add 6 cups of water to extract the milk)
3 tbsp. patis
2 tsp. of shortening

Boil and shell the halaan (clam). With 2 tsp. shortening, saute the minced garlic and add the chopped onions. Then mix the scrapped corn, boiled garbanzos and the diced potatoes. When cooked, pour in the coconut milk. Stir until it boils, then add the strips of red peppers when the washed malagkit is cooked. Remove from the fire and serve on a platter. Garnish with strips of pepper and serve.

CELESTINA MANAHAN

CORN VALENCIANA FILIPINA

2 c. corn ground
1 c crab meat
2 pcs. red and green pepper
1 onion bulb
1 segment garlic
2 tbsp. lard (pork)
1 c. coco milk
1 tsp. patis
4 small tomatoes (salt to taste)

Cook corn in 3 cups water. Sauté garlic in hot fat, onions and tomatoes for five minutes, add strips of red and green pepper. Add the coco milk. Boil for one minute. Drop crab meat; let boil, then add cook red corn, patis and salt to taste. Arrange in platter and serve. (Good for 6 persons)

Mrs. APOLONIA ROJO

MOLDED CORN

1 cup grated young mais
½ cup coconut milk
2 tbsp. sugar
1 tbsp. lard

Boil coconut milk, add the grated mais. Continue to boil till thoroughly cooked. Add sugar. To prevent from sticking, add lard. Mix well and mold in cups. Remove from the molds and serve cold.

BEATRIX ESTONILIO

CORNBURGER

8 ears of young yelow corn, grated
¼ kilo shrimps, chopped
2 tbsp. water
1 tbsp. cornstarch
½ head of garlic, minced

1 egg
¼ tsp. salt
¼ tsp. pepper
1 onion, finely chopped
A few onion leaves, chopped
Oil for frying
½ tsp. sugar

Grate the corn, mix all ingredients thoroughly. Fry by spoonfuls in hot cooking oil. Remove when done and serve. This can be served with tomato catchup or mafran sauce.

Mrs. V. S. ROLDAN

CORN LOAF

½ can corned beef
1 can peas
1 box raisins
2 tbsp. flour
6 fried bananas
2 segments garlic, minced
Salt to taste
3 cups corn kernel (cooked)
2 eggs
3 cups cooked rice
2 tbsp. lard
2 tomatoes, diced
1 onion, diced
2 red peppers, sliced

Sauté, garlic, onions, tomatoes. Add corned beef, corn and salt. Add the peas and raisins. Put vetsin and diced red pepper.

Arrange this mixture in the middle of a platter. Put molded rice along the sides. Between the rice molds, arrange fried bananas. On top of the corn mixture, put the two fried eggs. Serve.

Mrs. CATALINE ASUZAR

YOUNG CORN WITH MALUNGGAY

3 cups scrapped young corn
3 cups corn kernel
⅔ cup shrimps (shelled)
shrimp stock
3 cups corn kernel (cooked)
1 tbsp. patis
1 cup malunggay
2 tbsp. lard

Grate corn from cobs, dice the pork and shell the shrimps. Set aside. Put 2 tablespoons lard in a frying pan, heat. Sauté the garlic, then add patis when golden brown. Drop the pork and shrimps. Let boil for 10 minutes, then add the corn. Put to boil for another five minutes adding the shrimp stock and stirring at intervals to prevent from sticking. Let boil for another 10 minutes. Add patis to taste, then drop the malunggay leaves. Remove from the fire and serve.

Mrs. AURORA S. CUNANAN

RICE LA CUBANA TAGALA

2 cups boiled rice
4 tbsp. lard
1 regular size pepper (sweet green and red)

2 tsp. salt
½ cup ground meat (pork or beef)
2 heads of garlic
1 small box raisin
½ cup shell shrimps
½ tsp. black powder pepper
½ cup tomatoes sauce or 6 chopped regular tomatoes
¼ cup green onion.

Sauté garlic, onions, tomatoes or sauce and ground meat. Add boiled rice, salt pepper and shelled boiled shrimps. When done add the red and green sweet pepper raisin and finally put green onion leaves. Heat enough until done. Mold in cups and serve on green lettuce leaves. Decorate with the rest of the shrimp, red and green pepper. Serve while hot.

JUANITA RIVERA

RICE — CORN LUGLOG

2 cups boiled corn, grated
¼ kilo fine bihon (blanched 5 minutes and drained)
¼ cup lard (fresh pork fat)
5 pieces tinapa (minced)
¼ kilo dried boiled pork
¼ sliced boiled shrimps
1 cake diced tokua
½ crushed garlic
2 tbsp. sliced green onion
¼ cup cornstarch mixed with one cup water
¼ cup pounded chicharon
1 cup shrimp juice
2 tbsp. patis
2 hard boiled eggs, sliced crosswise
¼ cup achuete
A pinch of pepper

Sauté the garlic in 4 tbsp. fat. Pour the achuete water and bring to a boil. Add the shrimp juice and continue to boil. Then put the pork, shrimp, celery, tokua and season to taste. Lastly, add the cornstarch diluted with water. Boil and stir well until thick or until sauce consistency is reached.

Arrange ¼ cup corn and ½ cup bihon on a platter. Put sauce on top. Garnish with the tinapa, chicharon and the green onion.

Serve with patis and calamansi and more pepper if desired.

Mrs. AGAPITA HIPOLITO

PINIPIG — CORN DELIGHT

2 cups pinipig
1 cup finely grated, boiled or canned corn
1 cup condensed milk
3 tbsp. melted butter
3 egg yolks
1 tsp. strawberry extract a pinch of salt
Enough sugar to serve with

Moisten the pinipig with enough water to make it soft. Beat the egg yolks and set aside a little for topping.

Mix the milk, butter and salt with the egg yolks. Add the pinipig and corn and mix thoroughly.

Grease a baking pan. Pour the mixture in the greased pan and bake in moderate oven for 40 minutes.

When half done, brush the top with the remaining egg and sprinkle with sugar. Bake until brown.

Mrs. EMILIANA S. ARAGON

CORN PASTEL

1 cup diced celery
1 tbsp. chopped green onion
2 cups corn from the cob, grated
1½ cups milk
4 hard boiled eggs
Salt and pepper to taste
Pastry
2 tbsps butter or margarine

Celery and corn make a good combination but if celery is not available, use sweet green ball peppers instead.

Shell and chop the hard boiled eggs. Mix thoroughly with all the other ingredients and place in well-greased casserole. Do it with butter. Cover the casserole with a crust made of the following pasty:

Mix 1 cup flour, ⅓ cup butter or lard and ¼ cold water. Knead and roll. Fit over the casserole. Make slits on the top to allow steam to escape. Bake in a hot oven for 25 minutes or until pastry is golden brown.

Mrs. BETTY MONTE

CORN TAMALES

1 cup corn meal
3 cups coconut milk
½ cup pork cut into small pieces
½ cup shrimps
1 boiled egg
1 tbsp. shortening
2 segments garlic, minced
½ teaspoon black pepper
1 tbsp. toyo
1 tbsp. patis
¼ tsp. salt
2 tbsp. achuete liquid
1 small onion

Boil the pork in a little water and cook until brown. Put aside. Sauté the garlic, add the onions, then the shrimps and the pork. Add a little salt and pepper to taste. When cooked. separate half the ingredients in a container for garnishing leaving the remaining half in the pan.

Meanwhile, add a little water to the corn meal to make a thick paste. Pour this paste gradually to the boiling mixture in the pan stirring constantly. Add the remaining toyo. Mold in muffin pans and cool. Garnish with the rest of the ingredients set aside, and the sliced boiled egg. Serves 12.

Mrs. ELVIRA S. MACASPAC
Honorable Mention

CORN CROQUETTES

½ can corned beef
2 cups corn
2 eggs
2 cups cooked whole kernel corn
6 stalks celery
½ small onion
Flour two tbsps,
Pepper to taste
Fat for frying

Mash corned beef and corn together with the flour and two well-beaten eggs. Cut the onions and celery into small pieces and add to the mixture. Season with pepper.

Fry in deep, hot fat and serve hot together with catsup or vinegar and garlic.

Mrs. JULIETA ACUZAR

CORNCHI SALAD

1 cup canned mushrooms (optional)
1 can pineapple tidbits
1 cup boiled, chopped chicken meat
2 cups pinipig
½ strip gelatin
1 cup mayonnaise
1 red and 1 green sweet pepper
3 hard boiled eggs for garnishing
6 lettuce leaves for bed or base
Salt and pepper to taste as desires

First boil the chicken in enough water. When cooked, flake and chop. Then cut the mushrooms into fine slices and fry in 2 tablespoonfuls of margarine. When done, remove from the fire and set aside.

Blanch in boiling water the red and green pepper and cut into cubes. Remove the juice from the pineapple. When the ingredients are prepared, mix them all including the corn kernels with 1 cupful of mayonnaise until well blended. Season with fine salt and pepper as desired.

Make a bed of lettuce leaves, put the mixed salad and garnish with hard boiled eggs cut into quarters. Pineapple tidbits, red pepper, and corn kernels can also be used for decorations.

When everything has been finished, cover with wax paper and place in the refrigerator or ice box and serve cold.

Mrs. CATALINA ALZONA
Second Prize Winner

FRESH CORN LUMPIA

2 cups corn, canned or boiled and grated
1 cup sincamas, cut into strips
1 cup upo, cut into strips
¼ kilo pork, diced
2 cakes tokua, diced
¼ cup native celery, cut into pieces
2 tbsp. patis
4 tbsp. lard
4 head garlic, mixed
1 small onion, sliced
15 lumpia wrappers
3 heads lettuce
A dash of pper to taste
2 tbsp. soy sauce

Boil the pork in a small amount of water. Dice and separate the fat. Fry the fat. Fry the tokua. Set aside.

Sauté the garlic, add the onions. Put the shrimps and fried tokua, meanwhile stirring with the shrimp juice until it boils. Then add the corn, sincamas and upo. When done, add the celery and then the seasoning.

Put on a collander to drain. Wrap with lumpia wrapper, garnish with a lettuce leaf and serve with lumpia sauce. Sauce: 1 cup water; 1 tsp. salt; 2 tbsp. soy sauce; 2 tbsp. starch and ¼ sugar.

Mix all the ingredients together and allow to boil until it reaches sauce consistency. Serve with the lumpia.

Miss CLAUDIA HERRERA

PINIPIG CORN DELIGHT

2 cups pinipig
1 cup cooked young corn finely chopped
1 cup condensed milk
3 egg yolks
3 tbsp. butter melted
1 tsp. strawberry extract
A pinch of salt

Moisten the pinipig with little water enough to make it soft, beat the egg yolks, (set aside a little for topping) add the milk, butter and salt. Mix pinipig and corn, pour in the egg mixture and the strawberry extract. Mix all ingredients thoroughly, pour it in greased baking pan. Bake in moderate oven for about 40 minutes.

When half done brush the top with remaining egg yolk and a little sugar. Bake until done.

Mrs. EMELIANA S. ARAGON

CORN WITH TALINUM

1 cup grated young corn
20 shrimps, shelled and diced
1 small onion, sliced
3 segments garlic, minced
2 cups shrimp stock
Lard
2 cups Talinum leaves
Patis to taste

Sauté the garlic, add onions and then shrimps. Pour the patis, add the corn and the shrimp stock. Let it boil for about 15 minutes, or until corn is cooked. When done, add the talinum and boil for three minutes more. Remove from the fire and serve while hot.

CONCEPCION DE LA VEGA

CORN SOUP

1 chicken boiled (reserve the broth and use as liquid for the soup)
1 onion sliced
1 garlic, minced
2 cups corn, grated
1 can milk, evaporated
2 tbsp. margarine

Cook chicken until tender. When done, remove the bones and cut the chicken meat into small pieces. Strain the broth.

Sauté garlic and onion in the margarine. Add the chicken meat and the broth. When it is boiling, add the corn. Put vetsin and when cooked add the milk and continue stirring.

Serve hot.

Mrs. ELVIRA PATRO

COCO RICE

1 c. rice
½ tsp. salt.
2 c. coconut milk

Boil the coconut milk. Add the mashed rice and salt. Continue boiling to cook. Serve hot.

BEATRIC ESTONILLO

SWEET POPPED RICE

1 cup dried rice
½ cup lard
2 panuchas
½ cup water

Heat ½ cup of lard in a frying pan, add the rice little by little until it is toasted. Drain and set aside.

Break the panutsa in water and boil until thick. Drop the toasted rice and stir thoroughly until thick enough to mold into desired shape. Let cool and serve.

Mrs. ELSIE MAGNO

CORN RICE VALENCIANA

1 cup boiled rice
1 small chicken
1 onion chopped
1 bay leaf
1 can tomato sauce
1 small can peas
2 hard boiled eggs
1 clove garlic, bruished
4 tbsp lard
2 chorizos
2 fresh green and red pepper (cut into strips)
2 stalks green onions
2 tbsp. paminton (paprika)
1 cup cooked corn

Cut the chicken at the joints. Sauté the garlic and onions in 2 tbsp. lard. Add the chicken, cover and cook for 20 minutes. Add the sausage, bay leaf, paminton, tomato sauce and the green and red pepper. Add the boiled rice, corn and peas. Season with pepper and salt to taste. Cover and cook in a very low fire for 10 minutes adding extra 2 tbsp. lard to keep the rice from sticking. Transfer to a platter and garnish with finely sliced green onions, hard boiled eggs, and red and green pepper rings.

Mrs. ROSITA SOBREPENA

MAIS PATTIES

8 ears of yellow corn (young)
¼ kilo shrimps (chopped)
1 egg
¼ tsp. salt
¼ tsp. pepper
½ tsp. sugar
2 tbsp. water
1 tbsp. cornstarch
½ head of garlic sliced fine
1 onion (finely chopped)
A few onion leaves, chopped
Oil for frying

Scrap corn very fine. Mix all ingredients. Fry by spoonful in hot cooking oil.

Mrs. V. S. ROLDAN

CORN MARUYA

1 cup fresh, grated young corn
½ cup flour
½ teaspoon baking powder
1 egg, beaten
Salt and pepper to taste
Fat for frying

Heat eggs, add flour, baking powder and seasoning. Add the corn and mix well.

Heat plenty of fat in a deep frying pan or carajay. Drop by spoonfuls the corn mixture into the hot fat without spattering. Cook until delicately brown and drain on crumpled clean absorbent paper. Serve hot.

To turn this dish into ukoy, add small raw shrimps and chopped green union leaves into the mixture before cooking.

Mrs. BETTY MONTE

RICE A-LA-TAGALA

- 2 cups boiled rice
- 4 tbsp. lard
- ½ cup ground meat (pork or beef)
- 1 small box raisins
- ½ cup shelled shrimps
- ½ cup tomato sauce or 6 chopped regular-sized tomatoes
- 1 medium-sized onion, diced
- 2 tsp. salt
- 2 segments garlic, minced
- 2 sweet peppers (red and green), diced
- ¼ cup green onion, finely sliced
- A pinch of black pepper.

Sauté the garlic. Drop the onions, then the tomatoes or sauce. Simmer until thick. Add the ground pork to cook. Put the boiled rice, shrimps and the salt and pepper to taste. (Leave some of the shelled shrimps and pepper for garnishing.) When done, add the sweet pepper raisins and lastly the green onion. Cook until done.

Mold with the use of a cup and serve on a leaf of lettuce. Garnish with shrimps and pepper. Serve while hot.

JOSEFA RIVERA

CORN CUSTARD

CUSTARD

- 2 cups corn meal
- 3 cups water
- 1½ cups sugar
- 1 lemon rind (grated)
- 1 cup evaporated milk
- 5 egg yolks

GELATIN

- 1 cup water
- ½ strip gelatin

SYRUP

- ½ cup brown sugar
- ½ cup water

Soak corn meal in water for 5 minutes. Strain through a wire sieve to get the corn meal extract. Set aside.

Cream the egg yolks and sugar together. Add the milk little by little and then the corn extract. Drop the lemon rind in the mixture. Cook in a pan and stir until thick.

Boil the water and the gelatin together. Strain through the sieve into the corn meal mixture. Allow it to blend very well and pour into a 6-inch round tin mold to set.

Cook the sugar and water until it forms into a thick syrup.

Loosen the custard from the pan and invert it on a platter. Pour syrup on top and serve.

Mrs. ESTELA GATDULA

Chapter XIV

MAIN DISHES

EGG-IN-NEST

4	balls No. 20 thread for tying
1	kilo pork meat—remove skin and make it to thin tapa form longitudinally in size
1	tsp. salt
½	tsp. pepper (black powder)
2	calamansi (juice)
1	tbsp. toyo
½	c. lard for frying
1	bay leaf
2	heads onion
½	c. wine

Mix altogether and spread on the tapa pork all around. Set aside.

Boil 6 eggs. Cool and remove shell. Wash in cold water. Drain. Take one each time and wrap enough tapa covering the egg. Tie around. Fry in small amount of lard until brown. To the left over lard add enough water, put in a casserole and add the fried meat with two onions cut to halves, bay leaf and the wine. Cover and boil until tender. Cool and cut to halves. Place on top of the fried potato. Garnish with red pimientos and the sauce.

SAUCE

Place 2 tbsp. lard in a frying pan. Add 2 tbsp. cornstarch then mix well adding left over broth wherein the meat was softened. Place in a sauce bowl. Serve to the egg nest.

MEAT PATTIES

½ kilo ground meat
1 egg
2 tablespoon flour
1 onion diced
1 calamansi
4 stalks green onions cut very finely
¼ teaspoon pepper
2 spoonfuls soy sauce

Mix all ingredients and make into balls. Flatten them, Fry until brown.

PAKSIW PATA

1 whole pata
4 heads of garlic
½ cup vinegar
1 teaspoon salt
¼ tsp. pepper
1 small bay leaf
3 stems of oregano
1 tbsp. sugar

Clean and cut legs into pieces. Place in a pan ⅓ filled with water. Put all the ingredients, cover and cook until tender.

KULA'O (Head of pig)

½ head of pig (cleaned)
⅓ c. vinegar
1 tablespoon salt
1 head of garlic crushed
1 onion, minced
2 c. water
¼ black pepper powdered

Cook head of pig in water in slow fire until tender. Remove pork from bones and slice thinly. Dip in following sauce before eating. Kilawin sauce — Mix vinegar salt, black pepper, onion, garlic and ⅓ c. of water.

PORK ADOBO

1 kilo pork, cut to pieces of about 2 inches by 1½ inches
1 head garlic, pounded
4 teaspoons salt
1 teaspoon black pepper, ground
1 tablespoon lard
2 cups water
½ cup vinegar (native)

Place the pork in a saucepan. Add vinegar, garlic, pepper, salt, and water. Cover the saucepan and cook slowly until a small amount of soup is left, about ¼ cup. Drain: separate the pieces of garlic from the pork and fry in lard until brown. Add the pieces of pork and fry until brown. Add the soup and let simmer about 5 minutes. Serve hot.

To can:

Pack while boiling hot, seal hermetically using a hand can sealer and sterilize in No. 2 tall cans in the pressure cooker for 45 minutes at 20 lbs. pressure.

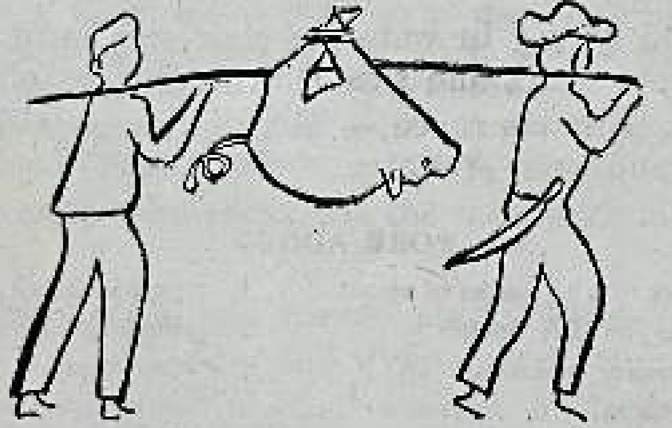
KILAWIN

1½ cups pig's liver, sliced to pieces about 4 cm. long, 2 cm. wide, and ¾ cm. thick
2 cups pork, sliced to pieces
1½ teaspoons black pepper corns, pounded fine
4 tablespoons lard
6 segments garlic, pounded
1 regular sized onion, sliced
½ cup vinegar, native
2 tablespoons salt
½ cup water

Fry the garlic in lard until light brown; add the onion, continue sauteing until the onion is done. Add the sliced liver, stirring the mixture for about 3 minutes, and pressing the pieces of liver with the back of a wooden spoon while frying. Add the pork and cook about 5 minutes stirring in the same manner while cooking. Season with pepper and salt; then add vinegar diluted with water. Let simmer for at least 15 minutes, or until the meat is tender and the mixture thickens.

To can:

Pack in cans while boiling hot, hermetically seal using a hand can sealer, and sterilize in number 2 tall cans for 30 minutes at 15 lbs. pressure.



DINUGUAN

3 cups internal organs (heart, liver, pancreas and meat with fat)
1½ cups blood
½ cup vinegar mixed with 1 cup water and 1 tablespoon salt
1 tablespoon salt (for seasoning when sauteing)
1 small onion, cut to pieces
3 segments garlic, pounded
2 hot peppers
3 tablespoons lard
3½ cups water

Clean and cut internal organs to small pieces. Cook in a saucepan with the vinegar mixture for about 15 minutes. In another saucepan, sautè garlic and onion. Add boiled internal organs and continue sauteing for 5 minutes. Add the blood little by little stirring the mixture while adding, and let boil. (Be sure to cut the coagulated blood to small pieces before adding). Add water, season with salt and cook covered until meat is tender. Place hot pepper just before removing from the fire. Keep covered and serve hot.

To can:

Pack in cans while boiling hot, seal hermetically using a hand can sealer and sterilize in number 2 tall cans 30 minutes at 15 lbs. pressure.

COCONUT GULAY

¾ cup tokua, cubed
⅔ cup potato, cut in 2-inch lengths
¾ cup squash tops, sorted
1 cup patola, cubed
5 cups coconut milk
1 tablespoon lard
1 tablespoon salt
¼ cup camote, cubed

Fry pork in lard, add tokua and cook till light brown. Add squash, camote, salt and coconut milk. Boil and keep stirring. Add patola and squash tops, cooking 10 minutes longer or until vegetables are done.

BULANGLANG TOKUA

1 cup malungay leaves
1 cup patola, cubed
1 cup upo, sliced
1½ tablespoon bagoong alamang
1 cup tokua, cubed
3 tablespoons tomatoes, sliced
½ of one onion
1 cup rice washing

Mix tomatoes, onion, bagoong, squash in deep sauce pan or pot. Add rice washing and boil. After 5 minutes cooking, add tokua and upo. When upo is almost tender, add malungay and cook 2 minutes longer or until malungay leaves are wilted. Remove from fire.

QUICK SINIGANG

6 sapsap or bisuyo fish
2 cups kangkong
½ cup green sampaloc fruit (tamarind)
2 whole pieces hot pepper (green, native)
2 cups rice washing
4 teaspoons salt
3 tablespoons tomatoes, sliced

Boil sampaloc in second or third rice washing. When soft remove from pan and press well to get acid juice. Add juice to boiling rice washing. Add tomatoes, pepper, salt and kangkong stem. Cook 2 minutes then drop in fish and kangkong leaves. Cook 3 minutes longer and serve.

LABORER'S SUKIYAKI

¾ cup beef meat and bone (cut in 2-inch lengths)
1 cup pechay, shredded
1½ cups bamboo shoot (labong) shredded and boiled
⅔ cup white tokua (soft), sliced
¼ cup green onion, native
1 cup cabbage, cut in squares
¼ toyo sauce
1 tablespoon lard
4 teaspoons sugar
3 cups beef bone stock

Boil beef bones with meat. When meat is tender slice to thin pieces. Heat the frying pan and grease with lard. Add tokua when lard is hot, and brown sides lightly. Add meat, vegetables, toyo and stock. Bring to boil, add sugar, and cook vegetables 5 minutes. Serve hot.

NOTE: Sukiyaki is served right off the pan and consequently must be cooked as it is eaten. If possible, uncooked vegetables or ingredients should be added one at a time as needed in the same broth.

FISH WITH AMPALAYA

2 cups flaked fish
2 segments garlic chopped fine
1 onion sliced thin
4 tablespoons lard
1 cup tomatoes
2 big-sized ampalaya, sliced crosswise
Salt to taste

Sauté the garlic and onions and when half done add the tomatoes and cook for two minutes; then add the sliced ampalaya, stir well and cover. Cook over slow fire for ten minutes stirring occasionally to avoid burning. Add the flaked fish and season with salt. Continue cooking for five more minutes and remove from the fire. Serve hot.

STUFFED EGGPLANTS

2 cups flaked fish
8 eggplants, baked or roasted
3 segments garlic, chopped
1 onion sliced and chopped
1 can tomatoes
6 tablespoons lard
4 eggs (raw)
Salt and pepper

Bake or roast the eggplants and peel.

Sauté the garlic and onions and when half done add the macerated tomatoes. Cook and stir for five minutes. Mix the flaked fish; season with enough salt and pepper. Beat one egg and mix with the fish mixture. Stuff the eggplants with this mixture.

Beat the whites of three eggs add the yolks and two tablespoons of flour. Season with salt. Dip in the stuffed eggplants and fry in hot fat until brown. Serve hot.

FISH-PINEAPPLE SURPRISE

1 Bañgus, flaked
½ cup bread crumbs
1 egg
1 can pineapple
Salt and pepper to taste

Flake the fish and mix with beaten egg and bread crumbs. Season with salt and pepper. Form into thin cake and press a well drained slice pineapple on each. Place on greased baking pan in a moderate oven (350 F) for 20 to 25 minutes.

STUFFED CHICKEN

1 large chicken
1 cup chopped, cooked ham
5 pieces of Morton sausage or
2 cans Vienna sausage chopped
1/2 kilo pork meat, round
6 egg yolks
1/2 cup raisins
4 hard-boiled eggs
8 tablespoons butter
1/2 cup chopped olives
1/2 cup sweet mixed pickles
3 calamansi fruits

Dress and bone the chicken. Marinate with calamansi juice, toyo and pepper the inside boned chicken. Mix ground pork, ham sausage, and egg yolk. Add olives raisins and sweet mixed pickles. Mix all the ingredients and add butter. Stuff the boned chicken with the mixture, sew up the opening. Wrap the chicken with a clean wet cheese cloth. Boil in chicken stock and cook until tender. Remove the cheese cloth and brown in deep hot fat or in an oven. Serve with the thickened gravy.

Chapter XV

DELICACIES

BARQUILLOS

- 1¼ cups flour
- 1 tablespoon butter
- 2 cups milk
- ½ cup water
- ⅓ cup sugar
- 3 egg yolks
- ¼ teaspoon vanilla

Mix all ingredients and strain. Later cook in a barquillera which has been heated and greased. Pour 1 teaspoon at a time; when slightly brown, roll with a small stick and cool.

BANANA BETTY

- 4 bananas
- 1½ cups pinipeg (rice)
- ¾ cup brown sugar
- ¼ cup butter
- [illegible] orange or lemon juice
- ½ cup milk

Alternate layers of sliced bananas with crumbs in a pyrex baking dish. On top of each layer of bananas sprinkle brown sugar. Dot with butter. Sprinkle over a few drops of orange or lemon juice. Sprinkle whole rice pinipeg over top layer. Add enough milk to half fill pudding dish.

Cover. Bake 20-30 minutes to brown the top. Serve hot.

FROZEN BANANA SALAD

- 2 teaspoons vanilla extract
- 1 teaspoon salt
- 4 teaspoons mayonnaise
- 2 packages cream cheese
- ½ cup "papaya maraschinos" cut in quarters
- 4 tablespoons crushed peaches
- 1 cup heavy cream
- ½ cup chopped walnuts
- 3 well ripened diced bananas
- Juice of 5 calamansi

Add calamansi juice and salt to mayonnaise and stir into cheese. Mix with the crushed pineapple, papaya maraschinos, nuts, and fold in whipped cream until firm. Add bananas. Turn into tray of automatic refrigerator and freeze 2 hours or longer. Unmold and cut in slices and serve on a bed of lettuce granished with some of the maraschinos.

DALIA SPONGE CAKE

1¾ c. cake flour
2 tsp. baking powder
1½ c. sugar
9 eggs
3 tsp. lemon juice diluted with water

Sift the flour once; measure and add the baking powder and sift three times. Set aside.

Separate the egg yolks from the whites. Beat the egg white, add ½ of the measured sugar. Beat until stiff but not dry. Beat the egg yolks, add the rest of the measured sugar, then the lemon juice. When lemon colored, add the beaten whites and continue beating until fluffly. Add the sifted flour. Mix well and pour in a well-greased cake pan. This will fill 2 pans. Bake in moderate oven from 10-15 minutes. Prepare butter icing. Ice the cake in the form of a dahlia flower.

BUTTER ICING

1 lb. butter
2 c. sugar
1 big can evaporated milk

Cream the butter, add the sifted sugar. Continue creaming only in one direction; add the milk in small amounts until smooth and fine.

Spread smoothly over the cake or use a cake decorator. This is enough to ice two cakes.

MOCHA CAKE

1 c. butter
2 c. sugar
8 eggs less 4 whites
¾ cups diluted milk
2 tbsps. powdered coffee
4 tsps. baking powder
3½ c. flour

Sift the flour, measure and add baking powder. Sift for three times.

Cream the butter, add the sugar;, when creamy, beat the egg one at a time. Mix well; add the sifted flour alternately with milk. Dissolve the coffee in the cup of milk. Beat egg whites and fold into the butter mixture. Pour on well greased 9 inch pan. Bake in 375F. for 20-25 minutes.

BUTTER CAKE

3½ cups wheat flour
1 cup butter
2 cups sugar
8 eggs
1 cup diluted milk
1 tsp. baking powder

Sift the flour and measure. Mix and add baking powder. Sift three times.

Cream the butter, add sugar. When creamy, beat in the egg one at a time separating the whites. Cream well and when fine and fluffy, add the sifted flour with the baking powder alternately with milk. Set aside. Beat egg whites until stiff but not dry. Fold into the batter mixture. Pour in a well greased 9 inch baking pan. Bake in moderate oven 350 C for 20-25 minutes.

ANGEL CAKE

1¼ c. egg white or 8-10 whites
1 c. cake flour
1½ c. sugar
1 tsp. lemon rind
1 tbsp. lemon juice
1¼ tsp. cream of tartar

Sift the dry ingredients. Measure the flour; add ½ cup sugar and sift three times. Set aside.

Beat the egg whites stiff but not dry, then add the rest of the sugar little by little. Add the cream of tartar, the rind and juice. Beat well until it stands in peaks; fold the sifted flour. Pour in an angel cake baking pan wet with water. Bake in a moderately slow oven 325 degrees F to 30 to 40 minutes.

FRUIT CAKE I

1 cup butter
8 eggs less 4 whites
3½ c. mixed candied fruits
Dice:
  red cherries
  lemon peel
  dates
  figs
  ciron
  prunes
  raisin
  condol
  orange peel
1 c. brown sugar
¾ c. wine (any brand)
1 cup mix nuts:
  kasuy
  walnut
  pecan
  pili
3½ c. flour (
⅓ tsp. nutmeg powder (can be omitted)
1 tsp. cinamon
4 tsp. baking powder

Measure dry ingredients and sift three times.

Cream the butter, add the sugar; then the eggs one at a time. Add the fruits, sprinkle with ¼ of the measured flour alternately with wine. Put flavoring, mix well. Pour in a well greased fruit cake pan; loaf pan preferably. Decorate top with glaced fruits. Bake in a moderate oven for 50 to 55 minutes. Invert when done; remove from pan and cool. Wrap nicely and pack.

FRUIT CAKE II

2½ cups glazed cake mix
1½ cups whole pili nuts, toasted
1 cup raisins (cut in half)
1 cup raisins (whole)
½ cup fruit juice
(orange or grape)
½ cup dark molasses
3 tbsp. brandy or ¼ cup dark rum
1 tsp. cinnamon
1 tsp. nutmeg
1 tsp. allspice
½ tsp. mace
1½ cups All Purpose Flour
¼ tsp. Salt
¼ tsp. soda
½ cup butter or margarine
¾ cup brown sugar, firmly packed
¼ cup whole
Strawberry preserve

Combine fruit, nuts fruit juice, molasses, brandy and spices in a large bowl. Mix well and let stand while preparing batter.

Sift together, flour, salt and soda and stir into fruit mixture. Add strawberry preserve.

Cream butter and sugar until fluffy. Beat in eggs, one at a time. Fold in fruit-flour mixture.

Pack cake mixture firmly into two loaf pans which have been lined with waxed paper. Bake in preheated slow oven (300°) for about 1 hour and 15 minutes or until cake is done.

Cool thoroughly and wrap in aluminum foil, sealing tightly.

Store in air-tight container.

CHOCOLATE CAKE

1 cup butter
2 cups sugar
6 eggs
3 cups flour
4 tsp. baking powder
4 sq. baker's chocolate
1 tsp. vanilla extract

Melt the sugar and chocolate on top of a double boiler. Cool Sift the flour, measure, and add baking powder sifting it for three times.

Cream the butter and add the sugar; when creamy add the sifted flour alternately with milk and flavoring. Mix well and pour in a well greased baking pan 9 inches in diameter. Bake in a moderate oven 350 F.

ENSAYMADA

1½ c. lukewarm water
4 cakes fleishman yeast
1 tsp. sugar
2 cups flour

Mix well and set to rise in warm place for 1 hour.

To sponge yeast above add:

½ c. sugar
2 cups flour
8 egg yolks

Mix again and set aside for another hour.

Cream thoroughly 1 1/2 c. butter; add 1/2 cup sugar and 8 eggs yolks. Add the second mixture and mix 6 cups flour. Knead and roll into ensaymadas. When risen, bake.

ROLLS

6 cups flour
1 cup milk
3 tbsp. sugar
4 tsp. salt
1 c. cold water
2 yeast cakes
1 egg
6 tsp. shortening

Sift flour and measure. Scald the milk in saucepan into large bowl. Pour in hot milk, stir until ingredients dissolve. Blend half of sifted flour (3 cups) into mixture. Add unbeaten egg. Beat butter until smooth. Add remaining flour. Stir until well mixed. If dough seems too soft to handle have a little more flour. Form into rolls; let rise and bake.

PINIPIG COOKIES

½ lb. butter or butter substitute
1½ c. sugar
3 eggs
3 c. puffed pinipig (cooled)
3 c. flour
1 tsp. baking powder
1 tsp. flavoring

Cream the butter and add the sugar. Add eggs and beat well. Add puffed pinipig cooled to room temperature. Add flour previously sifted with baking powder. Add lastly the grated rind. Drop by teaspoon on a well greased cookie pan and bake in a hot palayok oven from 7 to 10 minutes.

RICH COOKIES

1 c. butter
1½ c. sugar
3 eggs
3½ c. flour
1 tsp. baking powder
1 tsp. lemon rind or any flavoring

Cream the butter, then add the sugar. Add the eggs and beat well. If fluffy, add the sifted flour and lastly the rind or any flavoring. Mix well and pass it through a cookie press. Drop in a well greased cookie sheet. Bake in a hot oven for 10 to 15 minutes.

CORNSTARCH COOKIES

1 c. butter
1 c. sugar
5 eggs less 2 whites
5 c. cornstarch or arrow root starch
1 tsp. baking powder
1 tsp. flavoring

Same procedure as the Rick Cookies. Follow order of ingredients above.

PAPAYA PINEAPPLE CANDY

6 cups crushed pineapple
4⅓ cups sugar
6 cups crushed ripe papaya

Place in a copper vat the above ingredients. Cook, stirring continuously until thick and can be molded to candy in any desired form. Cool and wrap.

BAKING POWDER BISCUITS

2 cups flour
3-4 tsps. baking powder
5 tbsp. fat
¾ 1 cup milk
1 tsp. salt

Sift dry ingredients together twice. Work in fat with fingers or a fork, or cut in with 2 knives held back while working. Add milk, all at once, mixing until product cleaves from sides of bowl. Dough should be as soft as can be handled. Turn onto a lightly floured board, knead vigorously for 20 seconds. Shape into a ball. Pat or roll lightly into a sheet ½ to ¾ inches in thickness. Shape with a floured cutter. Place fairly close together on a floured pan. If crusty sides are desired, place farther apart. Bake in a hot oven (425-450 F.) 12 to 15 minutes. 20 biscuits, 1½" high, 2" in diameter.

TUTTI FRUITTI NUT COOKIES

1½ c. finely chopped casuy nuts or substitute
1½ c. sugar
3 eggs
½ c. finely cut glaced orange peel
3 c. flour
1 tsp. baking powder
1 tsp. flavoring
½ lb. butter or butter substitute

Cream the butter and add the sugar. Add eggs and beat well. Add nuts and orange peel. Add flour previously sifted with baking powder. Add lastly the flavoring. Drop by teaspoon on a well greased cookie pan and bake in a hot oven from 7 to 10 minutes.

COOKED MERINGUE

4 tablespoons water
4 tablespoons egg white
⅛ teaspoon salt
¾ teaspoon vanilla flavoring
1 teaspoon gelatine dissolved in 1 teaspoon water
1 cup sugar

Put water, egg whites, salt and sugar on top of double boiler and beat to blend ingredients. Soften gelatine in cold water. Cook egg white mixture over boiling water, beating constantly 3 or 4 minutes or until meringue piles into glossy peaks. Add softened gelatine and beat vigorously 1 minute. Remove from heat and place pan in cold water; beat until cool. Flavor and spread on pudding.

Chapter XVI

MISCELLANEOUS

(Recipes and other Preparations)

Those who worked with Miss Maria Y. Orosa before and during World War II volunteered to contribute their existing collections of their recipes and other preparations done as the occasions called for. It is a well known fact that Miss Orosa as a culinary expert had introduced not only recipes for frugal living but also novel ideas in meal presentation and food trends.

Meals of coconut preparations from soup to dessert were demonstrated before high officials of the government. Chicken roast in a palayok oven was beyond compare, remarked a foreign critic. The creative talent of the Pilipinos was all the more highlighted when she fashioned cakes into Dahlia, Book, Log, Fan, etc. Preserves were arranged to appeal to the asthetic sense of the consumer. The use of local pinipeg for cookies, homemade starches from banana, cassava, and other root crops into bread and cakes, were samples of her ingenuity. The war did prove that canning our native dishes as adobo, paksiw, dinuguan, kilawin, etc. made it possible to provide food to the guerrillas and American internees.

The Pagsanjan Rural Improvement derives comfort in the thought that their dish canning during the tense Japanese occupation saved them from starvation during evacuations.

This collection is confined to what the former staff members of the of the Plant Utilization Division can recall and gather of the procedures they had undertaken for meal preparation and canning. Soap and salt making procedures as resorted to during the war can certainly find its way into the present-day Pilipino home.

MANGO JAM

Scrape the pulp from the ripe mangoes and mash it. Use the stainless utensils to prevent discoloring. Then measure.

To every cup of pulp, add ½ cup of white sugar. In case of sour mangoes, increase sugar to 2/3 cup. Stir while cooking until it thickens. Pour while hot in jars or cans and sterilize. Sterilize quart jars for 30 minutes; pint jars for 25 minutes; ½ pound can and number two (2) tall cans, for 30 minutes.

PAN-DE SAL

1½ cups lukewarm water
1 tablespoon compressed yeast 12 g)
1¼ teaspoon sugar (7 g)
1½ cups cassava flour (115g)
3¾ cups wheat flour (425 g)

Dissolve yeast in lukewarm water. Add sugar, salt, and lastly, the sifted flours. Work and beat the dough until it is thoroughly smooth and fine. Set aside (aside) in a bowl. Let rise for 1½ hours. Punch and let rise again for 30 minutes. Roll to a cylindrical form about 2 feet long. Let rise for about 10 minutes. Then cut to 15 equal pieces. Dust with bread crumbs and let rise in a greased baking sheet till double their size. Bake in moderately hot palayok-oven for 15 to 20 minutes.

GUAVA JELLY

Sort and use one part of mature to one part of ripe guavas. This is purposely done to acquire the maximum pection from the green mature guavas and the distinct flavor from the ripe ones.

To one kilo of guavas, add 2 kilos water and boil to softness (from 30 to 35 guavas make a kilo). While boiling, mash with the aid of a wooden, aluminum or porcelain spoon (iron utensils should be avoided). Strain through a piece of cheese cloth and measure the juice. To every quart (almost a kilo) of guava extract, add 1 pint of sugar (refined), washed or brown may be used, but the brown imparts a dark color). Add 4 tablespoons of calamansi juice. Bring to a boil and strain to remove impurities. Boil again until the jelling point is reached (108°C or 226.4°F).

In the absence of a thermometer, the following test may be used: Place one drop of boiling jelly in a saucer containing a small amount of water. If it solidifies immediately, the end point is reached.

Transfer the jelly while hot in clear, dry jelly glasses. Cool and cover with a thin layer of melted paraffin. Cover, label and store it in a cool, dry place.

About 3 glasses of 10-oz. capacity may be made from the above recipe.

OROSA MAGIC FOOD

1 kilo toasted soy beans—grind very very fine
½ kilo sugar
1 c. Klim or powdered milk

Sift the toasted grinded soy beans. Heat in the oven for 30 minutes. Remove from the oven; add the sugar then the powdered milk. Place in a sterilized bottle and close tightly.

This can be eaten as it is or make a drink of 2 tbsp. to a glass of cold water. Stir well.

PORK AND BEANS

5 kilos cooked beans
1 kilo cured pork
35 cups catsup
600 grams sugar
200 grams salt
1 tablespoon pepper

Mix ingredients and heat. Can and sterilize.

CARAMELS

1 cup sugar
¼ cup water

Boil until thermometer registers 140°C. Drop by spoonfuls on a buttered sheet and top each with casuy nuts.

SOAP

1 kilo ash
5 liters water
50 grams lime
20 grams salt
200 cc. oil

Place ash in a cracked pot and pour the water over it, collecting the drippings in another container placed under the pot. Leach the ash this way for several times by pouring the drippings repeatedly over the ash.

Boil the lye collected with lime for 20 minutes. Allow to settle and decant clear liquid. Boil down this liquid to about half a liter. Heat the oil in an enamel pan, pour the lye gradually stirring slowly. Continue cooking a few minutes longer, then drop a small amount on a board. If it hardens upon cooling then the soap is done. Pour mixture immediately in molds.

REFINED SALT

Dissolve crude salt in water until a 100° saturation is reached. Filter the brine through sand, then evaporate brine at boiling temperature. Fish out crystals and drain then centrifuge immediately. Spray water to wash off impurities. Place centrifuged salt in trays and dry in a drier at 92°C. for 4 hours. Grind, then sift the refined salt.

KITCHEN HINTS

By Helen Orosa Del Rosario

Budget and plan for the week's marketing.

Buy foods that are in season and by the bulk — they cost cheaper.

For best results in cooking, clean and assemble all utensils and ingredients to be used. Cleaning, washing, soaking, cutting and sauteing should be done before cooking. When several ingredients are to be used, measure and mix them first before they are cooked.

Vegetables. When cooking vegetables, a small amount of shrimp broth or rice washings boiled in a high uncovered kettle should be used. This will keep the bright color of the vegetables and prevent them from being overcooked.

Buying. When buying meat cuts, ask for the bones and trimmings; these can be used for stocks for soups and vegetables.

Flour. To dissolve flour, use cold liquid first before adding the hot liquid. In making white sauce melt shortening and stir the flour into it before adding milk.

Starch mixtures. Starch mixtures such as spaghetti, macaroni, etc., should be cut to desired length before cooking. Before starch mixtures are added, the liquid used should be boiling. When cooked, strain and pass cold water and strain again This will prevent the starch mixture from getting sticky.

Eggs. When eggs are used in cooking add the mixture to the eggs and stir before heating. Eggs coagulate when heated.

Acid or Vinegar. Vinegar when cooked with egg or milk causes the mixture to curdle. If vinegar or acid is added in cooking vegetables, the vegetables should be softened first before vineger is added.

Salt and sugar. When cooking desserts add a dash of salt and in cooking meat or fish add a few grains of sugar.

Cooking rice. Don't throw away rice washing. It is rich in Vitamin B and maybe used for cooking when broth or sauce is desired. Left over cooked rice can be used for fried rice or sinañgag.

Refrigeration. Meat and fish are best kept in plastic container's in the refrigerator. This makes separation and removal easy.

Cutting. In cutting chicken use a sharp knife and cut between joints. Stainless steel knives are best for cutting potatoes, onions, bananas.

Discoloration. Soak pared potatoes, sweet potatoes, eggplants in water to avoid discoloration. Pared apples, bananas will not discolor if a little calamansi juice is added to them. Ripe bananas discolor less than unripe bananas. To prevent too much discoloration use a sharp knife for cutting fruits.

Oils. Used or left-over oils can be used over and over again if stored in a dry covered container after straining. Excess fat from pork or bacon maybe used for sauteing.

Shrimps. Shrimps if used are preferably shelled raw and sauted before hand. Don't throw away the shrimp shells; after pounding them, add water and strain. The resulting stock can be used for cooking vegetables.

Frying. In frying, the pan should be very clean and well-heated before lard or oil is poured on it. The lard or oil should be very hot when used for frying.

ABBREVIATIONS*

Baking powder — B.P.
Centigrade — C
Cup — C
Farhenheit — F
Grams — g
Kilo — k
Liter — ltr. or l.
Ounce — oz.
Quart — qt.
Pint — pt.
Pound — lb.
Tablespoon — tbsp.
Teaspoon — tsp.

EQUIVALENTS*

1 dash — slightly less than ⅛ teaspoon
1 teaspoon — 60 drops, liquid
3 teaspoons — 1 tablespoon
1 tablespoon — 1 cubic centimeter
16 tablespoon — 1 cup
2 cups — 1 pint
2 pints — 1 quart
4 quarts — 1 gallon
1 ounce (weight) — 28.35 grams
1 liter — 105 quarts-liquid
1 kilo — 2.2 lbs.

FORMULA TO F TO C*

$(C \times 9/5) + 32 = F$

$(F - 32)\ 5/9 = C$

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* Standard.

DEFINITION OF COOKING TERMS

APPETIZER — A small serving of food or beverage, served before meals

BAKE — To cook in an oven at a desired temperature

BASTE — To add liquid over food, while cooking, by pouring, brushing, spooning or wiping with fat drippings, etc.

BATTER — A smooth mixture of flour, liquid and other ingredients which can be poured, or used to coat food before frying

BEAT — To introduce air through agitation by means of a fork, spoon, whisk, or mechanical electric beater to insure a smooth mixture, as in egg white

BLANCH — To submerge in boiling water for a short time and then in cold water

BLEND — Combine ingredients until smooth or even

BOIL — To cook in liquid that has been heated until large bubbles constantly appear on the surface. Water boils at sea level at 100 C or 212 F

BOUILLION — Clear soup made from lean meat stock with seasoning.

BRAISE — To brown meat or vegetable in a little fat or oil, add a small amount of liquid, then cook over low heat, covered

BREAD CRUMBS — Dried pieces of bread thoroughly crused and well dried, but not browned. Soft bread crumbs are made by finely shredding fresh bread between fingers. Used for dressings, thickenings, filling, etc.

BREW—To let stand or boil in water, so as to extract flavor as in coffee.

BROIL—To cook in direct heat, on a broiler, hot coals or charcoal

BRINE — Mixture of salt and water

CANAPE—An appetizer made of a small piece of bread, etc.

spread with highly seasoned food, or may include fried *dilis*, *chicharon*, fried *hibi* or fried dried squid.

CHILL—To place in a cool or cold place until the temperature is lowered to a point between freezing and normal room temperature

CHOP — To cut into small pieces by use of a knife

CHOWDER — A dish made of fresh fish or clams, pork crackers, onions stewed together

CREAM—To make smooth, soft and creamlike by stirring or beating, as butter, lard, etc

CROUTONS — Cubes of toasted or fried bread served with soup

CUTLET — A small piece of meat cut from the leg or rib of veal, pork or chickens

DEVIL—To make a food hot or spicy by adding condiments

DILUTE — To reduce strength by adding liquid usually water

DISSOLVE — To mix a solid or powdered substance with liquid until it is liquid too.

DOUBLE BOILER—Combination of one pan on top of another so that food on the upper pan is cooked by the boiling water in the lower pan.

DREDGE—To coat a solid food by sprinkling flour, sugar, powdered bread

DRIPPINGS — Fats and liquid resulting from cooking meat

DUST — To sprinkle or coat lightly with a dry mixture

FILLET—Fleshy boneless side of a fish or boneless piece of meat

FLAKE — To cut or grate into shavings

FOLD IN — To add a light fluffy substance to a liquid or semi solid mixture so that the product maintains some of the lightness.

FREEZE—To store in a temperature of 0°C or 2 below 0

FRY—To cook in hot fat. Deep-fry: To cook in plenty of fat or oil. Pan fry or saute: using just a film of fat Shallow fry: using up to 1½ inches of fat

FUYUNG — To cook with eggs giving an omelet effect

GARNISH—To decorate food when ready to serve

GLAZE — To cover with thin syrup.

GRATE—To shred up fine by the use of a grater or to rub on a grater

GRILL—To cook by direct heat on a gridiron

HORS D'OEVERS—See canapes

KNEAD — To manipulate with a pressing motion, plus folding and stretching

LARD — To place strips of fat in lean meat either by drawing it through the meat or laying it in deep cuts on the surface., as in mechado.

LEAVEN—To cause baked foods to rise by adding a leavening agent as baking powder

LIQUOR — The fluid from meat or vegetables

MARACHINOS—Papaya balls preserved with red coloring

MARINATE — To add to food an acid-fat mixture (marinade) usually French dressing, or Olive oil-calamansi mixture

MASH — To crush or press with a fork so that the food becomes finer and plastic

MINCE—To chop up or cut real fine

MIX — To combine ingredients so that they are evenly distributed

MOLD — To put in a container so as to retain the shape even after the food has been removed.

PARBOIL—To boil food in water until it is partially cooked to remove outer covering with the use of a knife

PARE—To remove outer covering with the use of knife

PASTE — A fine homogenous mixture

PEEL — To remove outside covering usually with fingers

PUREE—A semi-liquid homogenous food ground finely and well mixed, or passed through fine sieve or strainer

ROAST — To cook uncovered, without adding moisture in an oven or open fire of charcoal, usually applied to meat

SCALD — To heat liquid just below the boiling point

SAUTE — Fry in a thin layer of fat

SEASON — To add salt, pepper, spices, herbs, to improve flavor

SECTION — To cut into one or two inches length

SHIFT — To press through a fine sieve as in flour

SHELL — To remove the outer covering or layer of a seed, nut or crustaceans

SHRED — To cut into strips, or tear finely

SIMMER — To cook in liquid just below boiling point

SLICE — To cut into very thin pieces

SMOKE—To soak in seasoning and put in layers on a rack over smoke of saw dust or charcoal

STEAM—To cook on a rack, in a closed container so that the heat of steam of the boiling water does the cooking.

STIR — To mix ingredients, using circular motion

STOCK — Liquid, usually water in which meat, fish or vegetables has been cooked

STUFF — To pack with a mixture

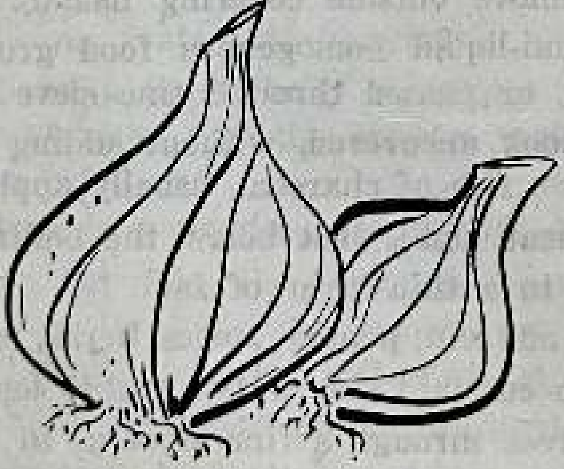
TOAST — To brown with dry heat

WEDGE — To cut in small triangular sections

WHIP—To incorporate air into a mixture by beating with a rapid rotary motion

OVEN GUIDE*

Slow oven — 275°F to 325°F
Moderate oven — 325°F to 375°F
Moderate hot oven — 375°F to 425°F
Hot oven — 425°F to 475°F
Very hot oven — 475°F and above



TAGALOG-ENGLISH TRANSLATION

ENGLISH	TAGALOG
Bitter melon	Ampalaya
Apples	Manzanas
Bacon	Tusino
Bake	Hornohin - ihurno
Balls	Bola-bola
Bamboo shoots	Labong
Banana	Saging
'Cooking banana'	Saging na saba
Barbecue	Inihaw
Baste	Basain nang sabaw
Bay leaf	Laurel
Beans:	
Hyacinth beans	Batao
Chick peas	Garbanzos
String beans	Sitao
Winged beans	Sigadillas
Lima beans	Patani
Baguio beans or Snow beans	Habichuelas
Mung bean	Mongo beans
Beat	Batihin
Beef	Karneng Baka
Beefsteak	Bistik
Beer	Cerveza
Beet	Remolacha
Beverage	Inumin
Blanch	Halabus—Ihalbos
Blend	Paghaluin
Boil	Ilaga—pakuluan
Bread	Tinapay
Breadcrumbs	Tinapay na imimugmug
To bread	Igulong sa dinikdik na tinapay
Bread fruit	Rimas
Breakfast	Almusal o agahan
Broil	Iihaw o ihawin
Butter	Mantekilya
Cabbage	Repolyo
Candy	Kendi

Sweets	Kalamay
Carrots	Zanahoria
Cassava	Kamoteng kahoy, balenghoy, kamoteng Moro
Casserole	Kaserola
Celery	Kinchay Baguio Kinchay China
Cheese	Keso
Chicken	Manok
Chilled	Pinalamig
Chocolate	Tsokolate
Cinnamon	Kanela
Cloves	Klavo de comer
Coconut	Niyog
Immature coconut	Buko
Grated coconut meat	Kinudkod na niyog
Coconut milk	Gata
Coconut trunk (pith)	Ubod
Freak coconut with no milk and all soft meat	Makapuno
Grated coconut meat with milk extracted	Sapal
Coconut precipitate after oil is extracted from milk	Latik
Coleslaw	Ensaladang hilaw na repolyo
Cook	Lutuin
Corn	Mais
Cornmeal	Mais na giniling
Cream	Nata-Krema
Ice cream	Sorbete
Croquettes	Kroquetas
Crush	Pitpitin
Cucumber	Pepino-pipino
Cut	Gayatin
Cup (measuring)	Taza
Dessert	Panhimagas
Dice	Tiladin nang cuadrádo
Dinner	Mabigat na tanghalian Hapunan
Drain	Patuluin
Dry	Tuyuin

Eggs	Itlog
Scrambled	Binati
Upside down	Estrelyado
Egg white	Puti nang itlog
Egg yolk	Pula nang Itlog
Fame flower	Talinum
Fat:	Taba
Solid	Mantika
Liquid	Langis
Fish	Isda
Smoked fish	Tinapa
Flour	Harina
Fritters	Marhuya or Maduya
Fry	Prito
Frying pan	Kawali
Deep pan	Kaldero
Gelatin	Gulaman
Ginger	Luya
Grate	Kudkurin
Grapes	Ubas
Grind	Gilingin
Guava	Bayabas
Ham	Hamon
Iced	Pinalamig
Jackfruit	Langka (Nangka)
Jam	Haleya
Lard	Mantika
Lemon	Dayap
Lettuce	Litsugas
Liver	Atay
Luncheon	Tanghalian
Lye	Lihiya
Mango	Manga
Meat	Karne
Melt	Tunawin
Mince	Dikdik
Milk	Gatas
Evaporated	Evaporada
Fresh	Sariwa
Mix	Paghaluin
Mongo sprouts	Togue
Mush	Masahin

Mushroom	Kabuti
Noodles —	
Miki	Wheat noodle with egg
Sutanghon	Mongo starch noodles
Misua	Fine thread like wheat noodles.
Bijon	Rice noodles
Pancit Canton	Dried wheat noodles
Omelet	Tortilya, torta
Onion	Sibuyas
Oranges	Suha o Naranjita
Oven	Hurno
Pan broil	"Asado sa Caranjay"
Pare	Talupan
Peel	Balatan
Parsley	Perijil
Peanut	Mani
Peas	Gisantes
Spanish Chickpeas	Garbanzos
Pickles	Atsara
Pork	Karneng Baboy
Pork crackers	Sitsaron
Popped-pork	Sitsaron
Salad	Insalada
Soy sauce	Toyo
Soy bean curd	Tokua
Cake of fermented flour and soy beans	Tausi
Starch	Gawgaw
Steam	Pasingaw
Stew	Pasina
Stir	Batihin
Stock	Sabaw
Sugar	Asukal
refined	refinado
brown	pulang asukal
crude	panutsa
Syrup	Arnibal
Salt	Asin
Sauce	Sarsa
Sauté	Igisa
Scald	Banlian
Soup	Sopas

Sour	Maasim
Sponge Gourd	Patola
Tablespoon	Kutsara
Teaspoon	Kutsarita
Toast	Tostahin
Tapioca	Sago
Tenderloin	Solomilyo
Tomatoes	Kamatis
Tripe	Goto
Turnips	Sinkamas
Pepper	Paminta
Pint	Dalawang Tasa
Potatoes	Patatas
Pumpkin (Squash)	Kalabasa
Radish	Labanos
Rice —	Bigas —
Glutinous rice and	Malagkit
Mixture of ground rice and water made to stand overnight	Galapong
Rice bran	Darak
Rice Husk	Ipa
Cooked rice	Kanin
Toasted Rice	Sinangag
Vinegar	Suka

Sea Foods Found in the Philippines

Anchovy	Dilis
Very fine dilis	Dulong
Salted or fermented dilis-	Bagoong
Barracuda	Trosilyo
Big eyed herring	Dilat
Big eyed scad	Matang baka
Caesio	Dalagang bukid
Carp	Carpa
Catfish	Hito (freshwater)
Cavalla	Talakitok
Clams	Tulya, Halaan, Kango
Crab	Alimango— thick shelled,

	dark skinned, heavy
	Alimasag— thin shelled, slender appendages, light colored
	Talangka
	Small fresh water crabs
Dried shrimps	Hibi
Eel	Igat
Goby	Bia
Codfish	Bakalaw
Groupers	Lapu-lapu
Hairtail	Balila
Lizard fish	Kalaso
Lobsters	Sugpu
Milkfish	Bangus
Mullet	Banak
Mudfish	Dalag
Murel	Dalag
Mussel	Tahong
Oysters	Talaba
Porgy	Bitilya
Ray	Pagi
Red Snapper	Maya maya
Scaled Brill	Dapa
Sea Bass	Apayap
Shark	Pating
Sharkfish	Kanduli
Shrimp	Hipon
Fine small shrimps	Alamang
Salted & fermented alamang	Bagoong
Slip mouth	Sap-sap
Snail	Susu
Spanish macherel	Tanguingui
Surgeon fish	Labahita
Sword fish	Spada
Spiny lobster	Banangan
Spotted Grunt	Ago-ot
Squib	Pusit
Stripped makerel	Alumahan
Tuna	Tulingan
Turbod or Sole	Lapad

WHAT THEY SAY . . .

The search for and discovery of various uses for our many food resources is by no means an easy task. It requires imagination, curiosity and diligence to develop quality food products from their raw stage. Thanks to Miss Maria Y. Orosa, who can be called our country's pioneer in the field of food technology, initial experiments have been made which can now be utilized by our present-day food technologists. Records of her work have been scattered as a consequence of World War II, some of which are printed while others still remain in her handwriting.

It is to the credit of her niece, Helen, that an attempt is made to collate these materials so that contemporary food scientists and processors, students as well as homemakers might benefit from Miss Orosa's experience with food materials.

— EVA GONZALES
Dean U.P. H.E. Department

Helen Orosa del Rosario is to be highly commended for gathering Maria Y. Orosa's articles and recipes from diverse sources and for compiling them in this book. It is the first authentic and comprehensive collection of its kind and deserves the serious attention of all those who are interested in improving the country's nutrition and diet.

— AMELIA T. VALENCIA
Food Page editor, *Manila Chronicle*

If this book receives the general patronage it deserves, food in Filipino homes will be more palatable, more nutritious, better balanced, and equally important, more economical to prepare. Helen is rendering a patriotic service to the country by publishing this valuable anthology.

— DORIS TRINIDAD
Food page editor, *Manila Times*

Helen Orosa del Rosario is like her aunt, the late Maria Y. Orosa, in more ways than one: she is intelligent, industrious, resourceful and imbued with a deep sense of nationalism. This explains why she has painstakingly compiled and edited a unique primer and guide to better health and living.

— AIDA F. ABAYA
Specialist, APC